Baxter Blasting Company

CA Lic. 309281

Dba M. J. Baxter Drilling Co.

P.O. Box 245
El Cajon, California 92022-0245

619-443-7800 office
619-561-4434 fax

February 3, 2012

Certified Return Receipt #7010 2780 0001 2841 1855

Mr. Keith Olinger
Enforcement Office (SFD-7-5)
U.S. EPA, Region 9
75 Hawthorne Street
San Francisco, CA 94105

Reference: 3900 Pyrite Street, Riverside County, California

Subject: Request information relating to the Stringfellow Superfund Site

Dear Mr. Olinger:

To the best of our ability we have searched the archives and assembled the information you requested in the attached letter dated November 3, 2011.

If you have any questions on the above please contact me or Jeff Brust at 619-443-7800.

Sincerely,

M.J. Baxter Drilling Co.

Glenn A. Inverso
President

cc: Jeff Brust

Baxter Blasting Company February 11, 2012

dba M.J.Baxter Drilling Co.

Lakeside, CA

The United States Environmental Protection Agency

Stringfellow Superfund Site

Pyrite Street Quarry
Riverside County, California

UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
REGION IX
75 Hawthorne Street
San Francisco, CA 94105

November 3, 2011

VIA FEDERAL EXPRESS: # 795367897458

Glenn A. Inverso, President
Baxter Blaster Company
dba M.J. Baxter Drilling Company
12485 Highway 67
Lakeside, CA 92040-1158

Re: Information Request Letter Related to Stringfellow Superfund Site

Dear Mr. Inverso:

The United States Environmental Protection Agency ("EPA") is spending public funds to investigate and respond to actual or threatened releases of hazardous substances, pollutants, and contaminants into the soil and groundwater from the Stringfellow Superfund Site (the "Site") in Riverside County, California. This letter seeks your cooperation in providing information and documents you may have pertaining to the operations of Baxter Blasting Company doing business as M.J. Baxter Drilling Company (the "Company") within the Site. The term "Site" as used herein refers to the properties in or near Pyrite Canyon that surround the former Stringfellow hazardous waste disposal area.

As part of its ongoing investigation of the Site, EPA is seeking to identify activities and parties that have or may have contributed to contamination at the Site. EPA believes that the Company may have information that will assist the EPA in its investigation, especially with regard to perchlorate releases. EPA requests that the Company answer the questions contained in Enclosure B. Definitions and instructions on how to respond to the questions are provided in Enclosure A.

Under Section 104(e) of Comprehensive Environmental Response, Compensation, and Liability Act ("CERCLA"), 42 U.S.C. §9604(e), EPA has broad information-gathering authority that allows EPA to require persons to furnish information or documents relating to:

(a) The identification, nature, and quantity of materials which have been or are generated, treated, stored, or disposed of at a vessel or facility or transported to a vessel or facility.

(b) The nature or extent of a release or threatened release of a hazardous substance or pollutant or contaminant at or from a vessel or facility.

(c) Information relating to the ability of a person to pay for or perform a cleanup.

Please note that the Company's compliance with this information request is mandatory. Failure to respond fully and truthfully may result in an enforcement action by EPA pursuant to Section 104(e)(5) of CERCLA, 42 U.S.C. §9604(e)(5). This statutory provision authorizes EPA to seek the imposition of penalties of up to $37,500 per day of noncompliance. Please be further advised that provision of false, fictitious, or fraudulent statements or representations may subject you to criminal penalties under 18 U.S.C. §1001. The information the Company provides may be used by EPA in administrative, civil, or criminal proceedings.

Some of the information EPA is requesting may be considered by the Company to be confidential. Please be aware that the Company may not withhold information upon that basis. If the Company wishes EPA to treat the information confidentially, it must advise EPA of that fact by following the procedures outlined in Enclosure A, including the requirement for supporting its claim for confidentiality.

This request for information is not subject to review by the Office of Management and Budget ("OMB") under the Paperwork Reduction Act because it is not an "information collection request" within the meaning of 44 U.S.C. §§3502(3), 3507, 3512, and 3518(c)(1). See also, 5 C.F.R. §§1320.3(c), 1320.4, and 1320.6(a).

We encourage the Company to give this matter its immediate attention and request that it provide a complete and truthful response to this information request within thirty (30) calendar days of its receipt of this letter. EPA is committed to moving forward with its investigation, and extensions of time for responses will only be granted upon a showing of good cause and for no more than 30 days. If the Company anticipates that it will need an extension, please request one as soon as possible. Requests for extensions made at or near the due date will not be viewed favorably by EPA. The Company's response to this letter should be made in writing and signed by you or a duly authorized representative of the Company. If some or all of the requested information has previously been provided to EPA, the Company may incorporate that information by referencing the date of the earlier response and the information contained therein that is responsive to the current information request.

The Company's response should include the appropriate name, address, and telephone number of the person to whom EPA should direct future correspondence in regard to this information request.

The Company's response to the information request should be directed to:

Keith Olinger, Enforcement Office (SFD-7-5)
U.S. EPA, Region 9
75 Hawthorne St.
San Francisco, CA 9410

If the Company has any questions regarding this letter, please contact Mr. Olinger at (415) 972-3125 or olinger.keith@epa.gov. Questions regarding the Site's cleanup status should be directed to the Remedial Project Manager, Julie Santiago-Ocasio, at (415) 972-3525 or santiago-ocasio.carmen@epa.gov. Questions regarding legal matters can be directed to Andrew Helmlinger at (415) 972-3904 or helmlinger.andrew@epa.gov. Thank you for your prompt attention to this matter.

Sincerely,

Kathi Moore

Kathi Moore, Manager
Case Development Cost Recovery Section
Superfund Division

Enclosures (2):

Attachment A (Instructions and Definitions)
Attachment B (Information Request)

ENCLOSURE A: INSTRUCTIONS AND DEFINITIONS

Instructions:

1. Answer Every Question Completely. A separate response must be made to each of the questions set forth in this information request. For each question contained in this letter, if information responsive to this information request is not in the Company's possession, custody, or control, please identify the person(s) from whom such information may be obtained.

2. Number Each Answer. When answering the questions in Enclosure B, please precede each answer with the corresponding number of the question and subpart to which it responds.

3. Number Each Document. For each document produced in response to this information request, indicate on the document, or in some other reasonable manner, the number of the question to which it corresponds.

4. Provide the Best Information Available. Provide responses to the best of the Company's ability, even if the information sought was never put down in writing or if the written documents are no longer available. The Company should seek out responsive information from current and former employees/agents. Submission of cursory responses when other responsive information is available will be considered non-compliance with this information request.

5. Identify Sources of Answer. For each question, identify (see Definitions) all the persons and documents that the Company relied on in producing its answer.

6. Continuing Obligation to Provide/Correct Information. If additional information or documents responsive to this information request become known or available to the Company after it responds to this information request, EPA hereby requests pursuant to CERCLA Section 104(e) that the Company supplement its response to EPA.

7. Scope of Request. The scope of this request includes all information and documents independently developed or obtained by research on the part of the Company, its attorneys and consultants or any of their agents, consultants or employees.

8. Confidential Information. The information requested herein must be provided even though the Company may contend that it includes confidential information or trade secrets. The Company may assert a confidentiality claim covering part or all of the information requested, pursuant to Sections 104(e)(7)(E) and (F) of CERCLA, 42 U.S.C. §§9604(e)(7)(E) and (F), and Section 3007(b) of RCRA, 42 U.S.C. §6927(b), and 40 C.F.R. §2.203(b). If the Company makes a claim of confidentiality for any of the information it submits to EPA, it must prove that claim. For each document or response the Company claims as confidential, it must separately address the following points:

   (a) Clearly identify the portions of the information alleged to be entitled to confidential treatment;

(b) Identify the period of time for which confidential treatment is desired (e.g., until a certain date, until the occurrence of a specific event, or permanently);

(c) Identify measures taken by the Company to guard against the undesired disclosure of the information to others;

(d) Explain the extent to which the information has been disclosed to others, and the precautions taken in connection therewith;

(e) Provide pertinent confidentiality determinations, if any, by EPA or other federal agencies, and a copy of any such determinations or reference to them, if available; and

(f) State whether the Company asserts that disclosure of the information would likely result in substantial harmful effects to the Company's competitive position, and if so, what those harmful effects would be, why they should be viewed as substantial, and an explanation of the causal relationship between disclosure and such harmful effects.

(g) To make a confidentiality claim, please stamp, or type, "confidential" on all confidential responses and any related confidential documents. Confidential portions of otherwise nonconfidential documents should be clearly identified. The Company should indicate a date, if any, after which the information need no longer be treated as confidential. Please submit the Company's response so that all nonconfidential information, including any redacted versions of documents, are in one envelope and all materials for which the Company desires confidential treatment are in another envelope.

(h) All confidentiality claims are subject to EPA verification. It is important that the Company satisfactorily show that it has taken reasonable measures to protect the confidentiality of the information and that it intends to continue to do so, and that the information is not and has not been obtainable by legitimate means without the Company's consent. Information covered by such claim will be disclosed by EPA only to the extent permitted by CERCLA Section 104(e). If no such claim accompanies the information when it is received by EPA, then it may be made available to the public by EPA without further notice to the Company.

9. Disclosure to EPA's Authorized Representatives. Information that the Company submits in response to this information request may be disclosed by EPA to authorized representatives of the United States pursuant to 40 C.F.R. § 2.310(h) even if the Company asserts that all or part of it is confidential business information. The authorized representatives of EPA to which EPA may disclose information contained in the Company's response are as follows:

GRB Environmental Services, Inc.
EPA Contract Number EPR90603

Department of Toxic Substances Control/California
Environmental Protection Agency

Toeroek & Associates, Inc.
EPA Contract Number BPA-11-W-001

CH2M Hill, Inc.
EPA RAC Contract Number EP-S9-08-04

SAIC (subcontractor under Toeroek & Associates, Inc.)
EPA Contract Number BPA-11-W-001

Any subsequent additions or changes in EPA contractors who may have access to the Company's response to this information request will be published in the Federal Register.

This information may be made available to these authorized representatives of EPA for any of the following reasons: to assist with document handling, inventory, and indexing; or to assist with document review and analysis for verification of completeness; or to provide expert technical review of the contents of the response. Pursuant to 40 C.F.R. § 2.310(h), the Company may submit comments on EPA's potential disclosure of any confidential information to its authorized representatives within the thirty (30) calendar day period in which the response is due.

10. Objections to Questions. If the Company has objections to some or all of the questions contained in the information request, it is still required to respond to each of the questions.

Definitions Applicable to Enclosure B, Information Request:

1. Any reference to Baxter Blasting Company, MJ Baxter Drilling Company, or the "Company" should be interpreted to include, but not be limited to, all officers, managers, employees, contractors, assigns, agents, trustees, predecessors, successors, subsidiaries, operating divisions, affiliates and branches.

2. The term "person" shall include any individual, firm, unincorporated association, partnership, corporation, trust, joint venture, or other entity.

3. The term "waste" or "wastes" shall mean and include trash, garbage, refuse, by-products, solid waste, hazardous waste, hazardous substances, and pollutants or contaminants, whether solid, liquid or sludge.

4. The term "hazardous waste" shall have the same definition as that contained in Section 1004(5) of RCRA.

5. The term "hazardous substance" shall have the same definition as that contained in Section 101(14) of CERCLA, and includes any mixtures of such hazardous substances with any other substances, including mixtures of hazardous substances with petroleum products or other nonhazardous substances.

6. The term "release" has the same definition as that contained in Section 101(22) of CERCLA, and includes any spilling, leaking, pumping, pouring, emitting, emptying, discharging, injecting, escaping, leaching, dumping, or disposing into the environment, including the abandonment or discharging of barrels, containers and other closed receptacles containing any hazardous substance or pollutant or contaminant.

7. The term "pollutant or contaminant" shall have the same definition as that contained in Section 101(33) of CERCLA and include any mixtures of such pollutants and contaminants with any other substance including petroleum products.

8. The term "materials" shall mean all substances that have been generated, treated, stored, or disposed of or otherwise handled at or transported to the Site including, but not limited to, all hazardous substances, pollutants or contaminants.

9. The term "documents" includes any written, recorded, computer generated, or visually or aurally reproduced material of any kind in any medium in your possession, custody, or control or known by you to exist, including originals, all prior drafts, and all non-identical copies.

ENCLOSURE B: INFORMATION REQUEST

1. State the full legal name, address, telephone number, position(s) held by, and tenure of the individual(s) answering any of the questions below on behalf of the Company.

2. Identify the individuals who are or were responsible for environmental matters for the Company's operations located in Pyrite Canyon near Glen Avon, California (the "Site"). Henceforth, the term "Site" shall be interpreted to include all real property surrounding the former Stringfellow hazardous waste disposal site and any improvements thereto. For each individual responsible for environmental matters, provide his/her full name, current or last known address, current or last known telephone number, position titles, and the dates each individual held such position.

3. Explain the Company's present operational status (e.g., active, suspended, defunct, merged, or dissolved).

4. Provide the date the Company was incorporated, formed, or organized. Identify the State in which the Company was incorporated, formed, or organized.

5. Identify the business structure (e.g., sole proprietorship, general partnership, limited partnership, joint venture, or corporation) under which the Company currently exists or operates, and identify all former business structures under which it existed or operated since its inception.

6. Provide a copy of the articles of incorporation, partnership agreement, articles of organization, or any other documentation (together with any amendments) demonstrating the particular business structure under which the Company has existed or operated since its inception.

7. If the Company is or was operating under a fictitious business name at the Site, identify the fictitious name and the owner(s) of the fictitious name, and provide a copy of the Fictitious Business Name Statement filed with the county.

8. List the names, titles, telephone number(s), and current or last known addresses of all individuals who are currently or were officers and/or owners of the Company during the time period when the Company operated at the Site, regardless of the business structure under which the Company is or was operated. Provide documentation of both the percentage of each individual's current or former ownership interest in the Company and the time period(s) during which he/she held this ownership interest.

9. Identify the dates the Company, under any of its current or former business structures, owned real property at the Site. Provide a copy of the title documentation evidencing the Company's ownership of the real property, a list of the assessor parcel numbers (current and historical), the street addresses associated with each parcel, and a map showing the locations and boundaries of all such parcels.

10. For any period of time in which the Company, under any of its current or former business structures, owned real property at the Site, provide the name, address, and phone number of any tenant, lessee or contractor. Identify the time period of each tenant's, lessee's and subcontractor's operations at the Site and briefly describe the type of operations conducted or performed by each.

Provide a copy of each lease, rental agreement, or any other document between the Company and its tenants, lessees and subcontractors for operations at the Site.

11. Provide the dates that the Company, under any of its current or former business structures, operated at the Site along with a brief description of the types of operations conducted at the Site.

12. Identify and provide last known contact information for all prior and subsequent operators/ occupants and property owners of the Site. Provide the time period of each party's operations or ownership and describe the type of operations each conducted at the Site.

13. Identify and describe the portion(s) of the Site where the Company conducted mining, quarrying, blasting, exploratory or other operations, and provide the dates during which the Company conducted each type of operation at the Site. Provide a copy of each lease agreement, subcontract agreement, mining lease, gravel and tailings lease, and other documents which establish the Company's relationship to the real property owner during the Company's operations at or occupancy of the Site.

14. Provide a scaled map of the Site that shows where the Company conducted or conducts mining, quarrying, blasting, exploratory or other operations. The map should include the locations of significant buildings, equipment and geographical features. Indicate the locations of all chemical and waste storage areas, and the boundaries of mining or quarrying districts and/or individual mines or quarries located within the Site.

15. Provide a detailed description of all activities involved in the mining, quarrying, blasting or other operations conducted by the Company at the Site.

16. Provide a list of all chemicals and hazardous substances used by the Company at the Site, identifying the chemical composition and quantities used. Provide copies of Material Safety Data Sheets ("MSDSs") for all hazardous substances used.

17. Provide copies of hazardous material business plans and chemical inventory forms (originals and updates) submitted by the Company to city, county, and state agencies for the Site.

18. Please identify all leaks, spills, or other releases into the environment of any hazardous substances or pollutants or contaminants that have occurred at or from the Site. In addition, identify and provide supporting documentation of:

    a. The date each release occurred;
    b. The cause of each release;
    c. The amount of each hazardous substance, waste, or pollutant or contaminant released during each release;
    d. Where each release occurred and what areas were impacted by the release; and
    e. Any and all activities undertaken in response to each release, including the notification of any local, state, or federal government agencies about the release.

19. Provide copies of all sampling and investigation reports for the Site that contain the laboratory or field analyses of the water quality of the aquifers, mine water, surface water, pit lake, tailing pond

discharges and receiving streams, air quality and soil quality, including a map showing the sampling locations.

20. Provide records, if any, on the dewatering of the mines that provide specific information on pump rates, pump station locations, pump sizes, and changes in aquifer piezometric heads.

21. Provide copies of the mine or quarry plans and process flow sheets used at any and all mines or quarries within the Site.

22. If explosives were used in the Company's operations at the Site, provide a complete list of the explosives and their chemical components, the time period that the respective explosives were used, and a map showing the locations where the respective explosives were stored and detonated. Provide copies of MSDSs for all explosives.

23. If any substance containing perchlorate was utilized in any of the Company's operations at the Site, provide a complete description of those operations. Indicate the approximate volume of perchlorate substances used per month at the Site, the dates perchlorate substances were used, and the storage and disposal practices in effect during the Company's operations at the Site for materials containing perchlorate. Include all documentation referencing or detailing the Company's use and disposal of perchlorate-containing substances.

24. Describe all waste materials generated from the Company's operations at the Site. Provide information on the storage and disposal methods for each waste, the frequency of disposal, and quantities of waste generated annually. Provide copies of all manifests or other documents evidencing the Company's offsite disposal of wastes from the Site.

25. Provide copies of all state and federal permits related to the Company's operations at the Site, including permits that the Company obtained on behalf of other entities.

Question #1:

State the full legal name, address, telephone number, position(s) held by, and tenure of the individual(s) answering any of the questions below on behalf of the Company.

Answer:

Mr. Glenn Inverso
P.O. Box 245
El Cajon, CA 92022
619-443-7800

Tenure- 2005 to present
2006 as President

Mr. Jeff Brust
P.O. Box 245
El Cajon, CA 92022
619-443-7800

Tenure- 1986 to present

Question #2:

Identify the individuals who are or were responsible for environmental matters for the Company's operations located in the Pyrite Canyon near Glen Avon, California (the "site"). Henceforth, the term "Site" shall be interpreted to include all real property surrounding the former Stringfellow hazardous waste disposal site and any improvements thereto. For each individual responsible for environmental matters, provide his/her full name, current or last known address, current or last known telephone number, position titles, and the dates each individual held such position.

Answer:

Mr. Michael T Baxter (deceased)
P.O. Box 245
El Cajon, CA 92022
619-443-7800

Titles- President from 1975 until Dec 2005

Mr. Glenn A. Inverso
P.O. Box 245
El Cajon, CA 92022
619-443-7800

Tenure- President January 2006 to present

Question #3:

Explain the Company's present operational status (e.g., active, suspended, defunct, merged, or dissolved).

Answer:

Baxter Blasting, Inc., dba: M.J. Baxter Drilling Company's operational status is a small business in an active business status.

Question #4:

Provide the date the company was incorporated, formed, or organized. Identify the State in which the Company was incorporated, formed, or organized.

Answer:

Baxter Blasting, Inc. was incorporated in the State of California on April 22, 1975.

Question #5:

Identify the business structure (e.g., sole proprietorship, general partnership, limited partnership, joint venture, or corporation) under which the Company currently exists or operates, and identify all former business structures under which it existed or operated since its inception.

Answer:

Baxter Blasting Company has operated as a Corporation since its inception on April 22, 1975.

Question #6:

Provide a copy of the articles of incorporation, partnership, agreement, articles of organization, or any other documentation (together with any amendments) demonstrating the particular business structure under which the Company has existed or operated since inception.

Answer:

See following pages for articles of incorporation.

734918

ENDORSED
FILED
In the office of the Secretary of State
of the State of California
APR 22 1975
MARCH FONG EU, Secretary of State
Janet E. Jauregui
Deputy

FILED
BUSINESS DIVISION
APR 26 1975
ROBERT D. ZUMWALT
CLERK, SAN DIEGO COUNTY
CALIFORNIA

ARTICLES OF INCORPORATION

OF

BAXTER BLASTING COMPANY

I.

The name of this corporation shall be BAXTER BLASTING COMPANY.

II.

The purposes for which this corporation is formed are:

(a) To engage primarily in the specific business of providing blasting and drilling services to be performed by registered personnel.

(b) Generally to provide licensed and registered personnel to perform services involving the use of explosives and equipment; to enter into and perform contracts wherein explosives are used for any and all other work which may be, or is generally done, by businesses of this kind.

(c) To engage in any business related or unrelated to those described in Paragraphs (a) and (b) of this Article II and from time to time authorized or approved by the board of directors of this corporation;

(d) To do business anywhere in the world;

35741

(e) To exercise any and all rights and powers now and hereafter granted to a corporation by law; and

(f) To act as principal, agent, partner, joint venturer or in any other legal capacity in any transaction.

The above purpose clauses shall not be limited by reference to or inference from one another, but each such purpose clause shall be construed as a separate statement conferring independent purposes and powers upon the corporation.

III.

The principal office for the transaction of the business of this corporation is located in the County of San Diego State of California.

IV.

The number of directors of this corporation is three (3).

V.

The names and addresses of the persons who are appointed to act as the first directors of this corporation are:

Name	Address
Michael T. Baxter	1759 Milton Manor, El Cajon, California 92020
Timothy Barrett	P O Box 171, Alpine, California 92001
Donald Partridge	1584 Norman Avenue, El Cajon, California 92021

VI.

The total number of shares which this corporation shall have authority to issue is 50,000 shares all of one class. The aggregate par value of all of said shares is Five Hundred Thousand Dollars ($500,000.00), and the par value of each such share is Ten Dollars ($10.00).

IN WITNESS WHEREOF, the undersigned, being the persons hereinabove named as the first directors of this corporation, have executed these Articles of Incorporation.

Michael T. Baxter

Timothy Barrett

Donald Partridge

STATE OF CALIFORNIA)
) SS
COUNTY OF SAN DIEGO)

On this 11 day of April, 1975, before me, a Notary Public for the State of California, personally appeared MICHAEL T. BAXTER, TIMOTHY BARRETT, and DONALD PARTRIDGE, known to me to be the persons whose names are subscribed to the within Articles of Incorporation and acknowledged to me that they executed the same.

WITNESS my hand and official seal.

Notary Public

OFFICIAL SEAL
MAUREEN BAUMING
NOTARY PUBLIC - CALIFORNIA
PRINCIPAL OFFICE IN
SAN DIEGO COUNTY
My Commission Expires Jan. 2, 1978

Question #7:

If the Company is or was operating under a fictitious business name at the Site, identify the fictitious name and the owner(s) of the fictitious name and provide a copy of the Fictitious Business Name Statement filed with the county.

Answer:

Baxter Blasting Company has operated under a Fictitious Business Name of M.J. Baxter Drilling Company since 1975.
See Fictitious Name Statements attached.

PLEASE SEND THE ENTIRE FORM

GREGORY J. SMITH
RECORDER/COUNTY CLERK
COUNTY OF SAN DIEGO
1600 PACIFIC HIGHWAY, RM 260
P.O. BOX 121750 SAN DIEGO, CA 92112-1750
(619) 237-0502

2006-018625

MAY-16-2006

FILED
GREGORY J. SMITH
SAN DIEGO COUNTY CLERK
FEES: 29.00
EXPIRES: MAY-16-2011
DEPUTY: J NEVES

SELECTED COPIES:

BANK (Certified) Yes • No
NEWSPAPER • Yes No
CUSTOMER • Yes No

$20.00 FOR FIRST BUSINESS NAME ON STATEMENT
$4.00 FOR EACH ADDITIONAL BUSINESS NAME FILED ON SAME STATEMENT AND DOING BUSINESS AT THE SAME LOCATION
$4.00 FOR EACH ADDITIONAL OWNER IN EXCESS OF ONE OWNER

THIS SPACE FOR USE OF RECORDER/COUNTY CLERK

FICTITIOUS BUSINESS NAME STATEMENT

(1) FICTITIOUS BUSINESS NAME (S) [X] Renewal Notification is an additional $5.00 fee

a. M. J. Baxter Drilling Company

b.

(2) LOCATED AT: 12465 Highway 67 North, Lakeside, CA. 92040
(Must have Street Address of Business including City, State, and Zip---- P.O. Box not acceptable)

Mailing Address: P.O. Box 245, El Cajon, CA 92022-0245
(optional)

(3) THIS BUSINESS IS CONDUCTED BY:

A. [ ] An Individual
B. [ ] Husband and Wife
C. [ ] A General Partnership
D. [ ] A Limited Partnership
E. [ ] Joint Venture
F. [X] A Corporation
G. [ ] A Business Trust
H. [ ] Co-Partners
I. [ ] A Limited Liability Company
J. [ ] Unincorporated Association-Other than a Partnership
K. [ ] Other (Please Specify)

(4) THE FIRST DAY OF BUSINESS WAS: 4/22/1975 OR - IF NOT YET STARTED, CHECK HERE: [ ]

(5) THIS BUSINESS IS HEREBY REGISTERED BY THE FOLLOWING:

#1 Baxter Blasting Company
Owner's Name or Corporation Name if incorporated

Residence Address or give STATE if incorporated

California
City State (2 digits) Zip

#2
Owner's Name or Corporation Name if incorporated

Residence Address or give STATE if incorporated

City State (2 digits) Zip

I declare that all information in this statement is true and correct. (A registrant who declares as true information he or she knows to b false is guilty of a crime.)

(6) [signature] Dana E. Casemier, Corp Sec-Tr
(Signature of Registrant) (Print name of person signing and, if Corporate Officer, also state title)

THIS STATEMENT WAS FILED WITH GREGORY J. SMITH, SAN DIEGO RECORDER/COUNTY CLERK AS INDICATED BY FILE STAMP ABOVE.
NOTICE - THIS FICTITIOUS NAME STATEMENT EXPIRES FIVE (5) YEARS FROM THE DATE IT WAS FILED IN THE OFFICE OF THE COUNTY CLERK. A NEW FICTITIOUS BUSINESS NAME STATEMENT MUST BE FILED BEFORE THAT TIME.
THE FILING OF THIS STATEMENT DOES NOT OF ITSELF AUTHORIZE THE USE IN THIS STATE OF A FICTITIOUS BUSINESS NAME IN VIOLATION OF THE RIGHTS OF ANOTHER UNDER FEDERAL, STATE, OR COMMON LAW (SEE SECTION 14411 ET SEQ., BUSINESS AND PROFESSIONS CODE.)
IT IS THE RESPONSIBILITY OF THE REGISTRANT TO DETERMINE THAT THE FICTITIOUS BUSINESS NAME SELECTED WILL NOT VIOLATE ANOTHER'S RIGHTS ESTABLISHED UNDER LAW.

LEASE PRINT OR TYPE
IMLY. YOU ARE MAKING
MULTIPLE COPIES.

GREGORY J. SMITH
RECORDER/COUNTY CLERK
1600 Pacific Highway, Room 260
P.O. Box 121750
San Diego, California 92112-1750
(619) 237-0502

SEE REVERSE SIDE FOR INSTRUCTIONS

FILING FEE
$17.00 - FOR FIRST BUSINESS NAME ON STATEMENT
$ 3.00 - FOR EACH ADDITIONAL BUSINESS NAME FILED ON SAME STATEMENT AND DOING BUSINESS AT THE SAME LOCATION
$ 3.00 - FOR EACH ADDITIONAL OWNER IN EXCESS OF ONE OWNER

FICTITIOUS BUSINESS NAME STATEMENT

This Space For Use of C

THE NAME[S] OF THE BUSINESS[ES]:

.....
(Print Fictitious Business Name[s] on Line Above)

LOCATED AT: .....
(Street Address of Business – If No Street Address Assigned – Give Exact Location of Business Plus P.O. Box or Rural Route)

IN: .....
(City and Zip)

IS (ARE) HEREBY REGISTERED BY THE FOLLOWING OWNER[S]:

#1 .....
(Corporate or Owner's Full Name – Type/Print)

.....
(Residence address if not incorporated)
(State of incorporation if incorporated)

.....
(City and Zip)

#2 .....
(Corporate or Owner's Full Name – Type/Print)

.....
(Residence address if not incorporated)
(State of incorporation if incorporated)

.....
(City and Zip)

#3 .....
(Corporate or Owner's Full Name – Type or Print)

.....
(Residence address if not incorporated)
(State of incorporation if incorporated)

.....
(City and Zip)

#4 .....
(Corporate or Owner's Full Name – Type or Print)

.....
(Residence address if not incorporated)
(State of incorporation if incorporated)

.....
(City and Zip)

This business is conducted by: ☐ an Individual ☐ Individuals – Husband and Wife ☐ a General Partnership
☐ a Limited Partnership ☒ a Corporation ☐ a Business Trust ☐ Co-Partners ☐ a Joint Venture
☐ an Unincorporated Association – other than a Partnership ☐ Limited Liability Company
☐ Other *(Specify)*.....
THE TRANSACTION OF BUSINESS BEGAN ON: .....

SIGNATURE OF REGISTRANT: .....

.....
(Print name of person signing and, if a Corporate Officer, also state title)

THIS STATEMENT WAS FILED WITH GREGORY J. SMITH, RECORDER/COUNTY CLERK OF SAN DIEGO COUNTY
ON DATE INDICATED BY FILE STAMP ABOVE.

[illegible] THIS BUSINESS NAME EXPIRES FIVE (5) YEARS FROM THE DATE IT WAS FILED IN THE OFFICE OF THE RECORDER/COUNTY CLERK. A NEW FICTITIOUS BUSINESS NAME STATEMENT MUST BE FILED PRIOR TO THAT DATE. [illegible]

CERTIFICATION

I hereby certify that the foregoing is a full, true and correct copy of the original on file with this office.
Gregory J. Smith, Recorder/County Clerk
By ..... , Deputy

ASSIGNED FILE NO. .....

[illegible] Co. CLK (REV. 10-95)

Question #8:

List the names, titles, telephone number(s), and current or last known addresses of all individuals who are currently or were officers and/or owners of the Company during the period when the Company operated at the Site, regardless of the business structure under which the Company is or was operated. Provide documentation of both the percentage of each individual's current or former ownership interest in the Company and the time period(s) during which he/she held this ownership interest.

Answer:

Year 2001-

Michael T Baxter (deceased)- President
12485 Hwy 67
Lakeside, CA 92040
619-443-7800

Steven Stockwell- Secretary, CFO
12485 Hwy 67
Lakeside, CA 92040
619-443-7800

Year 2003-

Michael T Baxter (deceased)- President
12485 Hwy 67
Lakeside, CA 92040
619-443-7800

Dana E Casemier- Secretary, CFO
12485 Hwy 67
Lakeside, CA 92040
619-443-7800

Year 2007-

Glenn A Inverso- CEO
12485 Hwy 67
Lakeside, CA 92040
619-443-7800

Judy L Clark-Secretary, CFO
12485 Hwy 67
Lakeside, CA 92040
619-443-7800

Jereanne V Baxter- Director
12485 Hwy 67
Lakeside, CA 92040
619-443-7800

Bob Beaver- Director
12485 Hwy 67
Lakeside, CA 92040
619-443-7800

Dana E Casemier-Director
12485 Hwy 67
Lakeside, CA 92040
619-443-7800

Question #9:

Identify the dates the Company, under any of its current or former business structures, owned real property at the Site. Provide a copy of the title documentation evidencing the Company's ownership of the real property, a list of the assessors parcel numbers (current and historical), the street addresses associated with each parcel, and a map showing the locations and boundaries of all such parcels,

Answer:

Baxter Blasting Company has not in the past nor presently owns any real property at the Site.

Question #10:

For any period of time in which the Company, under any of its current or former business structures, owned real property at the Site, provide the name, address, and phone number of any tenant, lessee or contractor. Identify the time period of each tenant's, lessee's and subcontractor's operations at the Site and a briefly describe the type of operations conducted or performed by each. Provide a copy of each lease, rental agreement, or any other document between the Company and its tenants, lessees and subcontractors for operations at the Site.

Answer:

Baxter Blasting Company has not in the past nor presently owned any real property at the Site.

Question #11:

Provide the dates that the Company, under any of its current or former business structures, operated at the Site along with a brief description of the types of operations conducted at the Site.

Answer: Work consisted of rock drilling and blasting for aggregate.

Hubbs Quarry

Date	Shot #
2002	
5/22/02	02-01
9/16/02	02-02
2003	
3/26/03	03-01
5/29/03	03-02
8/18/03	03-03
2004	
2/17/04	04-01
6/11/04	04-02
6/30/04	04-03
11/5/04	04-04
11/16/04	04-05
12/6/04	04-06
12/10/06	04-07
2005	
3/10/05	05-01
3/17/05	05-02
3/29/05	05-03
4/20/05	05-04
5/6/05	05-05
5/18/05	05-06
6/16/05	05-07
6/28/05	05-08
8/24/05	05-09
9/21/05	05-10
10/06/05	05-12
10/13/05	05-13
11/9/05	05-14
11/17/05	05-15
12/2/05	05-16
12/9/05	05-17
12/29/05	05-18
12/30/05	05-19

Gail Materials

Date	Shot #
2007	
2/15/07	01
6/26/07	02
7/11/07	03

Riverside Mining

Date	Shot #
2007	
7/31/07	01
8/14/07	02
8/28/07	03
9/14/07	04
9/24/07	05
10/1/07	06

2008

No work performed at Pyrite Street Quarry

Question #12:

Identify and provide last known contact information for all prior and subsequent operators/ occupants and property owners of the site. Provide the time period of each party's operations or ownership and describe the type of operations each conducted at the Site.

Answer:

Hubbs Quarry Pyrite Street 2002-2006 approx	Owner
Gail Materials Pyrite Street 2007	Operator/Subcontractor under Riverside Mining
Riverside Mining Pyrite Street 2007	Owner

To the best of our knowledge, these owner/operators sold rock and aggregate from this Site.

Question #13:

Identify and describe the portion(s) of the site where the Company conducted mining, quarrying, blasting, exploratory or other operations, and provide the dates during which the Company conducted each type of operation at the Site. Provide a copy of each lease agreement, subcontract agreement, mining lease, gravel and tailings lease, and other documents which establish the Company's relationship to the real property owner during the Company's operations at or occupancy of the Site.

Answer:

M J Baxter Drilling was a subcontractor working for the owner/operator conducting limited rock drilling and blasting in the northeast corner of the property. All blasting dates are found in Question 11.

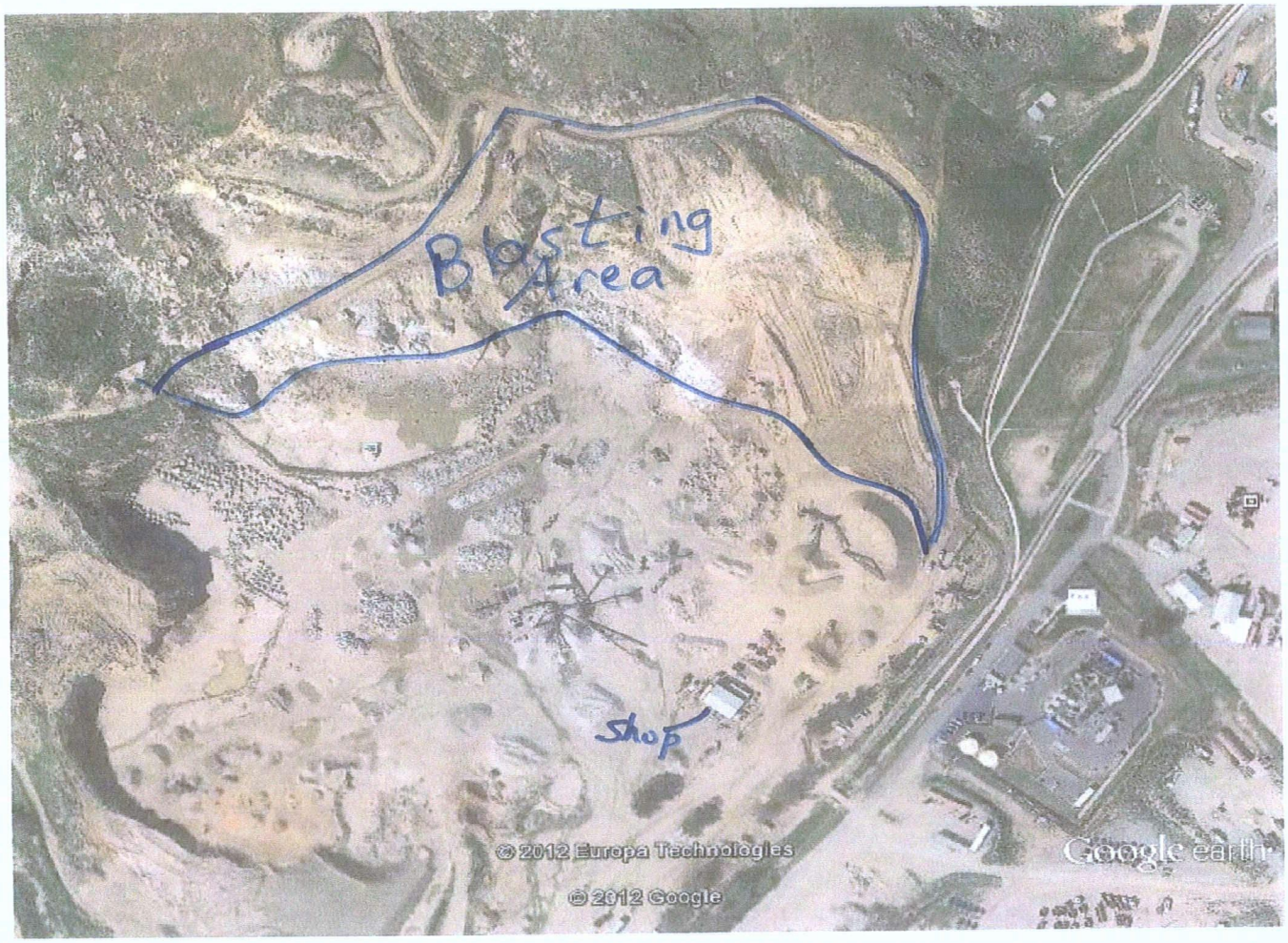
Question #14:

Provide a scaled map of the Site that shows where the company conducted or conducts mining, quarrying, blasting, exploratory or other operations. The map should include the locations of significant buildings, equipment, and geographical features. Indicate the locations of all chemical and waste storage areas, and the boundaries of mining or quarrying districts and/or individual mines or quarries located within the site.

Answer:

See enclosed maps.


String fellow
Hazardous Waste
Dump Site
Blasting Area
Quarry Site
Pyrite St
Pyrite St, Riverside, CA 92509
© 2012 Europa Technologies
© 2012 Google
Google earth
Google earth
feet
km
3000
1
N



Google earth

feet 1000
meters 300

N

Question #15:

Provide a detailed description of all activities involved in the mining, quarrying, blasting or other operations conducted by the Company at the Site.

Answer:

M J Baxter conducted rock drilling operations in the quarry using hydraulic percussion top-hammer rock drills. Holes were drilled in a pattern adequate for the proper use of explosives to fragment the bed rock.
Blasting was done to reduce the bed rock into desired sizing for the owner/operator to extract and render into sellable product.

Question #16:

Provide a list of all chemicals and hazardous substances used by the Company at the Site, identifying the chemical composition and quantities used. Provide copies of Material Safety Data Sheets ("MSDS") for all hazardous substances used.

Answer:

Enclosed are copies of the MSDS for products used from 2000 to 2007.

Slurran 805/806

Material Safety Data Sheet

5700 N. Portland, Suite 301 / Oklahoma City, OK 73112 / Phone: (405) 947-0765 / Fax: (405) 947-0768

SECTION 1 - PRODUCT INFORMATION

TRADE NAME:	Slurran 805, Slurran 806
SYNONYM:	NA
CHEMICAL FAMILY:	Watergel Slurry Explosive
FORMULA:	Mixture
CAS NUMBER:	None
UN/NA NUMBER:	UN0332
DOT HAZARD CLASS:	Explosive, Blasting, Type E, Class 1.5 D

SECTION 2 - HEALTH ALERT

DANGER - If misused or disposed of improperly, material could explode and cause death or serious injury.
DO NOT HANDLE WHEN IN DOUBT!!
See section VIII - Personal Protection
CHEM-TEL, INC. (800) 255-3924.

SECTION 3 - HEALTH HAZARD INFORMATION

EYE May cause moderate irritation.
SKIN: May cause moderate irritation characterized my redness and/or rash.
INHALATION: Inhalation of decomposed products may irritate the respiratory tract. Prolonged exposure to these fumes may result in respiratory difficulties (shortness of breath, etc.) and possibly more severe toxic effects.
INGESTION: Swallowing large quantities may cause toxicity characterized by dizziness, bluish skin coloration, methemoglobinemia, unconsciousness, abdominal spasms, nausea, and pain.

SECTION 4 - EMERGENCY AND FIRST AID PROCEDURES

EYE CONTACT: Flush with large amounts of water. Seek medical aid.
SKIN CONTACT: Remove contaminated clothing. Wash skin thoroughly with soap and water.
INHALATION: Remove from exposure. If breathing stops or is difficult, administer artificial respiration or oxygen. Seek medical aid.
INGESTION: Give 8-16 oz. of milk or water. Induce vomiting. Seek medical aid.

SECTION 5 - RECOMMENDED OCCUPATIONAL EXPOSURE LIMIT/ HAZARDOUS INGREDIENTS

EXPOSURE LIMIT (PRODUCT): None required for product.

HAZARDOUS INGREDIENTS:	PERCENT	EXPOSURE LIMIT	PPM	MG/M3
Ammonium Nitrate	<75	NONE		
Sodium Nitrate	<5	NONE		
Sodium Perchlorate	<5	NONE		
Nitric Acid*	<8	ACGIH - TLV	2	5
Hexamine*	<15	NONE		
Aluminum	<3	ACGIH - TLV	10	

*React to form Hexaminedinitrate
NOTE: All ingredients are present in a gelled slurry matrix and individual hazard may not be present in this formulation.

SECTION 6 - REACTIVITY DATA

CONDITIONS CONTRIBUTING TO INSTABILITY: Heat (confinement); Stacking (burning).
INCOMPATIBILITY: Can react violently or explode, with reducing agents and organic materials. Avoid amines, strong alkalies & acids.HAZARDOUS REACTION / DECOMPOSITION PRODUCTS: At high temperatures, especially >374 F, may emit severe toxic fumes of nitrogen oxides.
CONDITIONS CONTRIBUTING TO HAZARDOUS POLYMERIZATION: Not applicable.

SECTION 7 - FIRE AND EXPLOSION HAZARD INFORMATION

FLASH POINT & METHOD: NA AUTO IGNITION TEMPERATURE: Explodes
FLAMMABLE LIMITS (% BY VOLUME/AIR): LOWER: NA UPPER: NA
EXTINGUISHING MEDIA: Water
FIRE-FIGHTING PROCEDURES: When explosive is burning, EVACUATE AREA. Avoid breathing vapor
FIRE & EXPLOSION HAZARDS: Dangerous when exposed to heat or flame. Can support combustion of other materials involved in a fire and is capable of undergoing detonation if heated to high temperatures especially under confinement including being piled on itself in a burning fire. When heated to decomposition, highly toxic fumes may be emitted. Do not return to area of explosion until smoke and fumes have dissipated. Dry alkali or amine salts are explosive.

Slurran 805/806

Material Safety Data Sheet

SECTION 8 - PERSONAL PROTECTION INFORMATION

EYE PROTECTION: Safety goggles approved for the handling of explosives materials.
SKIN PROTECTION: Neoprene, natural rubber, polyethylene or polyvinyl chloride gloves. Use barrier creams, hand protection and protective clothing.
RESPIRATORY PROTECTION: Not normally required. Mechanical filter or supplied air type respirator as required for concentrations exceeding the occupational exposure limit.
VENTILATION: Maintain adequate ventilation. Use local exhaust if needed.

SECTION 9 - PERSONAL HANDLING INSTRUCTIONS

HANDLING: Explosives should not be abandoned at any location for any reason. Do not handle during electrical storms.
STORAGE: Store in a cool, dry, well-ventilated area remote from operations. Storage area should be of non-combustible construction.
Organic materials, flammable substances and finely divided metals should be stored separately. Flames, smoking and unauthorized personnel are prohibited where this product is used or stored. Protect against physical damage, static electricity and lightning.
WARNING: Use of this product by persons lacking adequate training, experience and supervision may result in death or serious injury.
Obey all Federal, State, and local laws / regulations applicable to transportation, storage, handling, and use of explosives.
DISTANCE: Always stay from area of explosion or disposal sites. Stay behind suitable barriers.

SECTION 10 - SPILL & LEAK PROCEDURES

PROCEDURES IF MATERIAL IS RELEASED OR SPILLED (IN ADDITION, SEE SECTION 8): Isolate area. Eliminate ALL sources of ignition. Avoid skin contact. Scrape up. Remove soiled clothing.
WASTE DISPOSAL - USE APPROPRIATE METHOD(S): Disposal of unexploded or deteriorated explosives material can be hazardous. Expert assistance is positively recommended in destroying explosives. Accidents can be prevented by thorough planning and handling in accordance with approved methods. Consult your supervisor, or the nearest SEC Regional Office for assistance. If improperly disposed of, material could explode and cause death or serious injury.

In all cases, follow facility emergency response procedures. Contact Facility Environmental Manager for assistance. Report any discharge of oil or hazardous substance that may enter surface waters to the National Response Center (800) 424 - 8802.

Observe all applicable local, state, and federal environmental spill and water quality regulations.

SECTION 11 - PHYSICAL DATA

BOILING POINT:	NA	BULK DENSITY:	1.25 g/cc
MELTING POINT:	NA	%VOLATILE BY VOLUME:	NA
VAPOR PRESSURE:	NA	EVAPORATION RATE (ETHER=1):	NA
SOLUBILITY IN WATER:	Negligible with short term exposure	APPEARANCE/ ODOR:	Odorless,gray/white gel
DECOMPOSITION POINT:	200 C		

SECTION 12 – COMMENTS

This product is classified as a Blasting Agent and need not be stored in a high explosive magazine, except where required by local regulations, as long as it is completely separate from any high explosives. Storage should be in a well constructed, well ventilated, dry structure located to conform with local, state, and federal regulations. The area surrounding an explosive magazine must be kept clear of combustible materials for a distance of 50 feet. Magazine floors and containers must be properly cleaned. Normal operating conditions are assumed unless otherwise stated. If any given information is not clear or does not apply to your situation, STOP, store the material suitably, and seek correct help from your supervisors, Institute of Makers of Explosives or Slurry Explosive Corporation.

Disposal sites must be clear of people at the time of disposal.

NOTICE: The data and recommendations presented herein are based upon data which are considered to be accurate. However, SEC makes no guarantee or warranty, either expressed or implied, of the accuracy or completeness of these data and recommendations.
For more detailed information on the hazards of this product, contact the Regulatory Compliance Department at the address below:

Slurry Explosive Corporation
P. O. Box 348
Columbus, Kansas 66725
(316) 597-2552

Revised 6-2001

Detagel

Material Safety Data Sheet

SEC Investments Corp. LLC.
5700 N. Portland, Suite 301 / Oklahoma City, OK 73112 / Phone: (405) 947-0765 / Fax: (405) 947-0768

SECTION 1 - PRODUCT INFORMATION	
TRADE NAME:	Detagel
SYNONYM:	NA
CHEMICAL FAMILY:	Watergel Slurry High Explosive
FORMULA:	Mixture
CAS NUMBER:	None
UN/NA NUMBER:	UN0241
DOT HAZARD CLASS:	Explosive, Blasting, Type E, Class 1.1 D

SECTION 2 - HEALTH ALERT

DANGER - If misused or disposed of improperly, material could explode and cause death or serious injury.
DO NOT HANDLE WHEN IN DOUBT!!
See section VIII - Personal Protection
CHEM-TEL, INC. (800) 255-3924.

SECTION 3 - HEALTH HAZARD INFORMATION

EYE: May cause moderate irritation.
SKIN: May cause moderate irritation characterized by redness and/or rash.
INHALATION: Inhalation of decomposed products may irritate the respiratory tract. Prolonged exposure to these fumes may result in respiratory difficulties (shortness of breath, etc.) and possibly more severe toxic effects.
INGESTION: Swallowing large quantities may cause toxicity characterized by dizziness, bluish skin coloration, methemoglobinemia, unconsciousness, abdominal spasms, nausea, and pain. Constituents can cause iodine uptake inhibition in the thyroid – this is not normally significant unless long term exposure at fairly high levels (not likely to occur in gel form) occurs. Avoid ingestion.

SECTION 4 - EMERGENCY AND FIRST AID PROCEDURES

EYE CONTACT: Flush with large amounts of water. Seek medical aid.
SKIN CONTACT: Remove contaminated clothing. Wash skin thoroughly with soap and water.
INHALATION: Remove from exposure. If breathing stops or is difficult, administer artificial respiration or oxygen. Seek medical aid.
INGESTION: Give 8-16 oz. of milk or water. Induce vomiting. Seek medical aid.

SECTION 5 - RECOMMENDED OCCUPATIONAL EXPOSURE LIMIT/ HAZARDOUS INGREDIENTS

EXPOSURE LIMIT (PRODUCT): None required for product.

HAZARDOUS INGREDIENTS:	PERCENT	Exposure Limit	CAS No.
Ammonium Nitrate	40-60	Not Listed	6484-52-2
Sodium Nitrate	14-19	10 mg/m3 (nuisance dust)	7631-99-4
Ammonium Perchlorate	1-5	10 mg/m3 (nuisance dust)	7601-89-0
Nitric Acid*	4-6	2ppm (ACGIH TWA)	7697-37-2
Hexamine*	5-9	10 mg/m3 (nuisance dust)	100-97-0
Aluminum	3-5	2 mg/m3	7429-90-5

*React to form Hexamine Nitrate Salt
NOTE: All ingredients are present in a gelled slurry matrix and individual hazard may not be present in this formulation.

SECTION 6 - REACTIVITY DATA

CONDITIONS CONTRIBUTING TO INSTABILITY: Heat (confinement); Stacking (burning).
INCOMPATIBILITY: Can react violently or explode, with reducing agents and organic materials. Avoid amines, strong alkalis & acids.
HAZARDOUS REACTION / DECOMPOSITION PRODUCTS: At high temperatures, especially >374°F, may emit severe toxic fumes of nitrogen oxides. *CONDITIONS CONTRIBUTING TO HAZARDOUS POLYMERIZATION:* Not applicable.

SECTION 7 - FIRE AND EXPLOSION HAZARD INFORMATION

FLASH POINT & METHOD: NA *AUTO IGNITION TEMPERATURE:* Explodes *EXTINGUISHING MEDIA:* Water *FLAMMABLE LIMITS (% BY VOLUME/AIR): LOWER:* NA *UPPER:* NA
FIRE-FIGHTING PROCEDURES: When explosive is burning, EVACUATE AREA. Avoid breathing vapor. Don't disturb fire, as burning explosives can become very sensitive to impact and friction, detonation can occur.

Detagel

Material Safety Data Sheet

SECTION 7 - FIRE AND EXPLOSION HAZARD INFORMATION (con't.)

FIRE & EXPLOSION HAZARDS: Dangerous when exposed to heat or flame. Can support combustion of other materials involved in a fire and is capable of undergoing detonation if heated to high temperatures, especially under confinement, including being piled on itself in a burning fire. When heated to decomposition, highly toxic fumes may be emitted. Do not return to area of explosion until smoke and fumes have dissipated. Dry alkali or amine salts are explosive.

SECTION 8 - PERSONAL PROTECTION INFORMATION

EYE PROTECTION: Safety goggles approved for the handling of explosives materials.
SKIN PROTECTION: Neoprene, natural rubber, polyethylene or polyvinyl chloride gloves. Use barrier creams, hand protection and protective clothing.
RESPIRATORY PROTECTION: Not normally required. Mechanical filter or supplied air type respirator as required for concentrations exceeding the occupational exposure limit.
VENTILATION: Maintain adequate ventilation. Use local exhaust if needed.

SECTION 9 - PERSONAL HANDLING INSTRUCTIONS

HANDLING: Explosives should not be abandoned at any location for any reason. Do not handle during electrical storms.
STORAGE: Store in a cool, dry, well-ventilated area remote from operations. Storage area should be of non-combustible construction and in accordance with appropriate BATF regulations. Organic materials, flammable substances and finely divided metals should be stored separately. Flames, smoking and unauthorized personnel are prohibited where this product is used or stored. Protect against physical damage, static electricity and lightning.
WARNING: Use of this product by persons lacking adequate training, experience and supervision may result in death or serious injury. Obey all Federal, State, and local laws / regulations applicable to transportation, storage, handling, and use of explosives.
DISTANCE: Always stay away from area of explosion or disposal sites. Stay behind suitable barriers.

SECTION 10 - SPILL & LEAK PROCEDURES

PROCEDURES IF MATERIAL IS RELEASED OR SPILLED (IN ADDITION, SEE SECTION 8): Isolate area. Eliminate ALL sources of ignition. Avoid skin contact. Scrape up. Remove soiled clothing.
WASTE DISPOSAL - USE APPROPRIATE METHOD(S): Disposal of unexploded or deteriorated explosives material can be hazardous. Expert assistance is positively recommended in destroying explosives. Accidents can be prevented by thorough planning and handling in accordance with approved methods. Consult your supervisor, or the nearest SEC Regional Office for assistance. If improperly disposed of, material could explode and cause death or serious injury.

In all cases, follow facility emergency response procedures. Contact Facility Environmental Manager for assistance. Report any discharge of oil or hazardous substance that may enter surface waters to the National Response Center (800) 424 - 8802.

Observe all applicable local, state, and federal environmental spill and water quality regulations.

SECTION 11 - PHYSICAL DATA

BOILING POINT:	NA	*BULK DENSITY:*	1.20 g/cc
MELTING POINT:	NA	*%VOLATILE BY VOLUME:*	NA
VAPOR PRESSURE:	NA	*EVAPORATION RATE (ETHER=1):*	NA
SOLUBILITY IN WATER:	Negligible with short term exposure	*DECOMPOSITION POINT:*	200° C
APPEARANCE/ ODOR:	Odorless, gray/white gel packaged in polyethylene cartridges		

SECTION 12 - COMMENTS

This product is classified as a Class 1.1D High Explosive and must be stored in a high explosive magazine. Storage should be in a well constructed, well ventilated, dry structure located to conform to local, state, and federal regulations. The area surrounding an explosive magazine must be kept clear of combustible materials for a distance of 50 feet. Magazine floors and containers must be properly cleaned. Normal operating conditions are assumed unless otherwise stated. If any given information is not clear or does not apply to your situation, STOP, store the material suitably, and seek correct help from your supervisors or the Institute of Makers of Explosives. Bureau of Alcohol, Tobacco, and Firearms regulations for explosive storage and handling should be consulted and complied with. Disposal sites must be clear of people at the time of disposal.

NOTICE: The data and recommendations presented herein are based upon data which are considered to be accurate. However, SEC makes no guarantee or warranty, either expressed or implied, of the accuracy or completeness of these data and recommendations.

For more detailed information on the hazards of this product, contact the Regulatory Compliance Department at the address below:

DetaCorp, PO Box 462, Columbus, Kansas 66724, (620) 597-2552.

Revised 10-2003

Slurran XG

Material Safety Data Sheet

SEC Investments Corp. LLC.
5700 N. Portland, Suite 301 / Oklahoma City, OK 73112 / Phone: (405) 947-0765 / Fax: (405) 947-0768

SECTION 1 - PRODUCT INFORMATION	
TRADE NAME:	Slurran XG
SYNONYM:	NA
CHEMICAL FAMILY:	Watergel Slurry Explosive
FORMULA:	Mixture
CAS NUMBER:	None
UN/NA NUMBER:	UN0332
DOT HAZARD CLASS:	Explosive, Blasting, Type E, Class 1.5 D

SECTION 2 - HEALTH ALERT

DANGER - If misused or disposed of improperly, material could explode and cause death or serious injury.
DO NOT HANDLE WHEN IN DOUBT!!
See section VIII - Personal Protection
CHEM-TEL, INC. (800) 255-3924.

SECTION 3 - HEALTH HAZARD INFORMATION

EYE May cause moderate irritation.
SKIN: May cause moderate irritation characterized my redness and/or rash.
INHALATION: Inhalation of decomposed products may irritate the respiratory tract. Prolonged exposure to these fumes may result in respiratory difficulties (shortness of breath, etc.) and possibly more severe toxic effects.
INGESTION: Swallowing large quantities may cause toxicity characterized by dizziness, bluish skin coloration, methemoglobinemia, unconsciousness, abdominal spasms, nausea, and pain. Constituents can cause iodine uptake inhibition in the thyroid – this is not normally significant unless long term exposure at fairly high levels (not likely to occur in gel form) occurs. Avoid ingestion.

SECTION 4 - EMERGENCY AND FIRST AID PROCEDURES

EYE CONTACT: Flush with large amounts of water. Seek medical aid.
SKIN CONTACT: Remove contaminated clothing. Wash skin thoroughly with soap and water.
INHALATION: Remove from exposure. If breathing stops or is difficult, administer artificial respiration or oxygen. Seek medical aid.
INGESTION: Give 8-16 oz. of milk or water. Induce vomiting. Seek medical aid.

SECTION 5 - RECOMMENDED OCCUPATIONAL EXPOSURE LIMIT/ HAZARDOUS INGREDIENTS

EXPOSURE LIMIT (PRODUCT): None required for product.

HAZARDOUS INGREDIENTS:	PERCENT	EXPOSURE LIMIT	CAS NO.
Ammonium Nitrate	10 - 20	Not Listed	6484-52-2
Sodium Nitrate	10 - 20	10 mg/m3 (nuisance dust)	7631-99-4
Ammonium Perchlorate	20 - 30	10 mg/m3 (nuisance dust)	7790-98-9
Nitric Acid*	5 - 10	2 ppm (ACGIH TWA)	7697-37-2
Hexamine*	10 -1 5	10 mg/m3 (nuisance dust)	100-97-0
Micro-balloons	<5%	10 mg/m3 (nuisance dust	65997-17-3

*React to form Hexaminedinitrate
NOTE: All ingredients are present in a gelled slurry matrix and individual hazard may not be present in this formulation.

SECTION 6 - REACTIVITY DATA

CONDITIONS CONTRIBUTING TO INSTABILITY: Heat (confinement); Stacking (burning).
INCOMPATIBILITY: Can react violently or explode, with reducing agents and organic materials. Avoid amines, strong alkalis & acids. HAZARDOUS REACTION / DECOMPOSITION PRODUCTS: At high temperatures, especially >374 F, may emit severe toxic fumes of nitrogen oxides.
CONDITIONS CONTRIBUTING TO HAZARDOUS POLYMERIZATION: Not applicable.

SECTION 7 - FIRE AND EXPLOSION HAZARD INFORMATION

FLASH POINT & METHOD: NA AUTO IGNITION TEMPERATURE: Explodes
FLAMMABLE LIMITS (% BY VOLUME/AIR): LOWER: NA UPPER: NA
EXTINGUISHING MEDIA: Water

Slurran XG

Material Safety Data Sheet

SECTION 7 - FIRE AND EXPLOSION HAZARD INFORMATION (cont.)

FIRE-FIGHTING PROCEDURES: When explosive is burning, EVACUATE AREA. Avoid breathing vapor.
FIRE & EXPLOSION HAZARDS: Dangerous when exposed to heat or flame. Can support combustion of other materials involved in a fire and is capable of undergoing detonation if heated to high temperatures especially under confinement including being piled on itself in a burning fire. When heated to decomposition, highly toxic fumes may be emitted. Do not return to area of explosion, until smoke and fumes have dissipated. Dry alkali or amine salts are explosive.

SECTION 8 - PERSONAL PROTECTION INFORMATION

EYE PROTECTION: Safety goggles approved for the handling of explosives materials.
SKIN PROTECTION: Neoprene, natural rubber, polyethylene or polyvinyl chloride gloves. Use barrier creams, hand protection and protective clothing.
RESPIRATORY PROTECTION: Not normally required. Mechanical filter or supplied air type respirator as required for concentrations exceeding the occupational exposure limit.
VENTILATION: Maintain adequate ventilation. Use local exhaust if needed.

SECTION 9 - PERSONAL HANDLING INSTRUCTIONS

HANDLING: Explosives should not be abandoned at any location for any reason. Do not handle during electrical storms.
STORAGE: Store in a cool, dry, well-ventilated area remote from operations. Storage area should be of non-combustible construction. Organic materials, flammable substances and finely divided metals should be stored separately. Flames, smoking and unauthorized personnel are prohibited where this product is used or stored. Protect against physical damage, static electricity and lightning.
WARNING: Use of this product by persons lacking adequate training, experience and supervision may result in death or serious injury.
Obey all Federal, State, and local laws / regulations applicable to transportation, storage, handling, and use of explosives.
DISTANCE: Always stay from area of explosion or disposal sites. Stay behind suitable barriers.

SECTION 10 - SPILL & LEAK PROCEDURES

PROCEDURES IF MATERIAL IS RELEASED OR SPILLED (IN ADDITION, SEE SECTION 8): Isolate area. Eliminate ALL sources of ignition. Avoid skin contact. Scrape up. Remove soiled clothing.
WASTE DISPOSAL - USE APPROPRIATE METHOD(S): Disposal of unexploded or deteriorated explosives material can be hazardous. Expert assistance is positively recommended in destroying explosives. Accidents can be prevented by thorough planning and handling in accordance with approved methods. Consult your supervisor for assistance. If improperly disposed of, material could explode and cause death or serious injury.

In all cases, follow facility emergency response procedures. Contact Facility Environmental Manager for assistance. Report any discharge of oil or hazardous substance that may enter surface waters to the National Response Center (800) 424 - 8802.

Observe all applicable local, state, and federal environmental spill and water quality regulations.

SECTION 11 - PHYSICAL DATA

BOILING POINT:	NA	BULK DENSITY:	1.22 g/cc
MELTING POINT:	NA	%VOLATILE BY VOLUME:	NA
VAPOR PRESSURE:	NA	EVAPORATION RATE (ETHER=1):	NA
SOLUBILITY IN WATER:	Negligible with short-term exposure	DECOMPOSITION POINT:	200 C
APPEARANCE/ ODOR:	Odorless, gray/white gel		

SECTION 12 – COMMENTS

This product is classified as a Blasting Agent and need not be stored in a high explosive magazine, except where required by local regulations, as long as it is completely separate from any high explosives. Storage should be in a well-constructed, well-ventilated, dry structure located to conform to local, state, and federal regulations. The area surrounding an explosive magazine must be kept clear of combustible materials for a distance of 50 feet. Magazine floors and containers must be properly cleaned. Normal operating conditions are assumed unless otherwise stated. If any given information is not clear or does not apply to your situation, STOP, store the material suitably, and seek correct help from your supervisors or the Institute of Makers of Explosives. Bureau of Alcohol, Tobacco, and Firearms regulations for explosive storage and handling should be consulted and complied with. Disposal sites must be clear of people at the time of disposal.

NOTICE: The data and recommendations presented herein are based upon data, which are considered accurate. However, SEC makes no guarantee or warranty, either expressed or implied, of the accuracy or completeness of these data and recommendations. For more detailed information on the hazards of this product, contact the Regulatory Compliance Department at the address below:

DetaCorp, PO Box 462, Columbus, Kansas 66724, (620) 597-2552.

M919
& M929

Material Safety Data Sheet

Hallowell Manufacturing, LLC.
3600 NW 74th Street, P.O. Box 462, Columbus, KS. 66725

SECTION 1 - PRODUCT INFORMATION	
TRADE NAME:	M919 & M929
SYNONYM:	Max, Max1
CHEMICAL FAMILY:	Emulsion Explosive
FORMULA:	Mixture
CAS NUMBER:	None
UN/NA NUMBER:	UN0332
DOT HAZARD CLASS:	Explosive, Blasting, Type E, Class 1.1 D

SECTION 2 - HEALTH ALERT

DANGER - If misused or disposed of improperly, material could explode and cause death or serious injury.
DO NOT HANDLE WHEN IN DOUBT!!
See section VIII - Personal Protection
CHEM-TEL, INC. (800) 255-3924.

SECTION 3 - HEALTH HAZARD INFORMATION

EYE May cause moderate irritation.
SKIN: May cause moderate irritation characterized my redness and/or rash.
INHALATION: Inhalation of decomposed products may irritate the respiratory tract. Prolonged exposure to these fumes may result in respiratory difficulties (shortness of breath, etc.) and possibly more severe toxic effects.
INGESTION: Swallowing large quantities may cause toxicity characterized by dizziness, bluish skin coloration, methemoglobinemia, unconsciousness, abdominal spasms, nausea, and pain. Constituents can cause iodine uptake inhibition in the thyroid – this is not normally significant unless long term exposure at fairly high levels (not likely to occur in emulsified form) occurs. Avoid ingestion.

SECTION 4 - EMERGENCY AND FIRST AID PROCEDURES

EYE CONTACT: Flush with large amounts of water. Seek medical aid.
SKIN CONTACT: Remove contaminated clothing. Wash skin thoroughly with soap and water.
INHALATION: Remove from exposure. If breathing stops or is difficult, administer artificial respiration or oxygen. Seek medical aid.
INGESTION: Give 8-16 oz. of milk or water. Induce vomiting. Seek medical aid.

SECTION 5 - RECOMMENDED OCCUPATIONAL EXPOSURE LIMIT/ HAZARDOUS INGREDIENTS
EXPOSURE LIMIT (PRODUCT): None required for product.

HAZARDOUS INGREDIENTS:	PERCENT	EXPOSURE LIMIT	CAS NO.
Ammonium Nitrate	70-90	Not Listed. No value established	6484-52-2
Micro-balloons	<5%	10 mg/m3 (nuisance dust)	66997-17-3
Aluminum	<5%	15mg/m3	7429-90-25
Mineral Oil	<1%	10mg/m3	64742-53-8 Or 64742-52-5
Polyolefin Amino-Ester Salt	<0.5%	N/A	67762-77-0

NOTE: All ingredients are present in an emulsion matrix and individual hazard may not be present in this formulation.

SECTION 6 - REACTIVITY DATA

CONDITIONS CONTRIBUTING TO INSTABILITY: Heat (confinement); Stacking (burning).
INCOMPATIBILITY: Can react violently or explode, with reducing agents and organic materials. Avoid amines, strong alkalis & acids. HAZARDOUS REACTION / DECOMPOSITION PRODUCTS: At high temperatures, especially >374°F, may emit severe toxic fumes of nitrogen oxides and oxides of carbon.
CONDITIONS CONTRIBUTING TO HAZARDOUS POLYMERIZATION: Not applicable.

SECTION 7 - FIRE AND EXPLOSION HAZARD INFORMATION

FLASH POINT & METHOD: NA
FLAMMABLE LIMITS (% BY VOLUME/AIR):
EXTINGUISHING MEDIA: Water
AUTO IGNITION TEMPERATURE: Explodes
LOWER: NA UPPER: NA

M919/M929

Material Safety Data Sheet

SECTION 7 - FIRE AND EXPLOSION HAZARD INFORMATION (cont.)

FIRE-FIGHTING PROCEDURES: When explosive is burning, EVACUATE AREA. Avoid breathing vapor.
FIRE & EXPLOSION HAZARDS: Dangerous when exposed to heat or flame. Can support combustion of other materials involved in a fire and is capable of undergoing detonation if heated to high temperatures especially under confinement including being piled on itself in a burning fire. When heated to decomposition, highly toxic fumes may be emitted. Do not return to area of explosion, until smoke and fumes have dissipated.

SECTION 8 - PERSONAL PROTECTION INFORMATION

EYE PROTECTION: Safety goggles approved for the handling of explosives materials.
SKIN PROTECTION: Neoprene, natural rubber, polyethylene or polyvinyl chloride gloves. Use barrier creams, hand protection and protective clothing.
RESPIRATORY PROTECTION: Not normally required. Mechanical filter or supplied air type respirator as required for concentrations exceeding the occupational exposure limit.
VENTILATION: Maintain adequate ventilation. Use local exhaust if needed.

SECTION 9 - PERSONAL HANDLING INSTRUCTIONS

HANDLING: Explosives should not be abandoned at any location for any reason. Do not handle during electrical storms.
STORAGE: Store in a cool, dry, well-ventilated area remote from operations. Storage area should be of non-combustible construction. Organic materials, flammable substances and finely divided metals should be stored separately. Flames, smoking and unauthorized personnel are prohibited where this product is used or stored. Protect against physical damage, static electricity and lightning.
WARNING: Use of this product by persons lacking adequate training, experience and supervision may result in death or serious injury. Obey all Federal, State, and local laws / regulations applicable to transportation, storage, handling, and use of explosives.
DISTANCE: Always stay away from area of explosion or disposal sites. Stay behind suitable barriers.

SECTION 10 - SPILL & LEAK PROCEDURES

PROCEDURES IF MATERIAL IS RELEASED OR SPILLED (IN ADDITION, SEE SECTION 6): Isolate area. Eliminate ALL sources of ignition. Avoid skin contact. Sorape up. Remove soiled clothing.
WASTE DISPOSAL - USE APPROPRIATE METHOD(S): Disposal of unexploded or deteriorated explosives material can be hazardous. Expert assistance is positively recommended in destroying explosives. Accidents can be prevented by thorough planning and handling in accordance with approved methods. Consult your supervisor for assistance. If improperly disposed of, material could explode and cause death or serious injury.

In all cases, follow facility emergency response procedures. Contact Facility Environmental Manager for assistance. Report any discharge of oil or hazardous substance that may enter surface waters to the National Response Center (800) 424 - 8802.

Observe all applicable local, state, and federal environmental spill and water quality regulations.

SECTION 11 - PHYSICAL DATA

BOILING POINT:	NA	BULK DENSITY:	1.27 g/cc
MELTING POINT:	NA	%VOLATILE BY VOLUME:	NA
VAPOR PRESSURE:	NA	EVAPORATION RATE (ETHER=1):	NA
SOLUBILITY IN WATER:	Negligible with short-term exposure	DECOMPOSITION POINT:	374°F
APPEARANCE/ ODOR:	Odorless, off white or grey gel		

SECTION 12 – COMMENTS

This product is classified as a 1.1D High Explosive and must stored in a high explosive magazine. Storage should be in a well-constructed, well-ventilated, dry structure located to conform to local, state, and federal regulations. The area surrounding an explosive magazine must be kept clear of combustible materials for a distance of 50 feet. Magazine floors and containers must be properly cleaned.

Normal operating conditions are assumed unless otherwise stated. If any given, information is not clear or does not apply to your situation, STOP, store the material suitably, and seek correct help from your supervisors or the Institute of Makers of Explosives. Bureau of Alcohol, Tobacco, and Firearms regulations for explosive storage and handling should be consulted and complied with. Disposal sites must be clear of people at the time of disposal.

NOTICE: The data and recommendations presented herein are based upon data, which are considered accurate. However, SEC makes no guarantee or warranty, either expressed or implied, of the accuracy or completeness of these data and recommendations. For more detailed information on the hazards of this product, contact the Regulatory Compliance Department at the address below.

Hallowell Manufacturing, LLC PO Box 482, Columbus, Kansas 66724, (620) 597-2552.

Revised 11-2006

Accurate Energetic Systems, LLC

MATERIAL SAFETY DATA SHEET

ACCURATE'S CAST BOOSTERS
MSDS NO. 1002.020

HAZARD RATING: Health - 2 Flammability - 3 Reactivity - 4 Special - High Explosive Component

SECTION I - MANUFACTURE'S INFORMATION

Manufacture/Distributor Name: Accurate Energetic Systems, LLC
Address: 5891 Highway 230 West, McEwen, TN 37101
Telephone Number: (931) 729-4207
Emergency Telephone Number: 1-800-255-3924
Date Prepared: 03/29/01 **Supercedes:**

SECTION II - CHEMICAL COMPOSITION

Component	CAS #	%	OSHA PEL	ACGIH TLV	Other Limits
TNT (trinitrotoluene; trinitrotoluol; tolite)	118-96-7	As required	1.5 mg/m^3 skin	0.1 mg/m^3 TWA skin	0.5 mg/m^3 NIOSH TWA skin IDLH - 500 mg/m^3
RDX (cyclotrimethylene trinitramine; hexogen; cyclonite)	121-82-4	As required	n/a	0.5 mg/m^3 TWA skin	1.5 mg/m^3 NIOSH TWA 3.0 mg/m^3 STEL; skin
HMX (cyclotetramethylene tetranitramine; octogen)	2691-41-0	As required	n/a	n/a	n/a
PETN (pentaerythritol tetranitrate)	78-11-5	As required	n/a	n/a	n/a
Desensitizing Wax		As required	n/a	2 mg/m^3 *	2 mg/m^3 * NIOSH

(* These exposure limits are for paraffin wax fume, similar to this material)

NOTE: Hazard Class 1, Division 1; SCG "D"

NOTE: Materials in this product are subject to the reporting requirements of SARA, Title III, Section 313 as follows:
None

SECTION III - PHYSICAL AND CHEMICAL DATA

Boiling Point: 464^{0}F (TNT explodes)
Specific Gravity: 1.5 minimum
Melting Point: TNT - 79^0-80^{0}C
Vapor Pressure (mm Hg): RDX/TNT - 0.1 @ 100^{0}C
Vapor Density (Air = 1): n/a
Evaporation Rate (Butyl Acetate = 1): n/a
Solubility In Water: 0.01% @ 68^{0}F (TNT)
Appearance And Odor: Cardboard tube containing tan to grayish-brown solid. No distinguishing odor.

Accurate Energetic Systems, LLC

MATERIAL SAFETY DATA SHEET

ACCURATE'S CAST BOOSTERS
MSDS NO. 1002.020

HAZARD RATING: Health - 2 Flammability - 3 Reactivity - 4 Special - High Explosive Component

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TNT (trinitrotoluene; trinitrotoluol; tolite)	118-96-7	As required	1.5 mg/m^3 skin	0.1 mg/m^3 TWA skin	0.5 mg/m^3 NIOSH TWA skin IDLH - 500 mg/m^3
RDX (cyclotrimethylene trinitramine; hexogen; cyclonite)	121-82-4	As required	n/a	0.5 mg/m^3 TWA skin	1.5 mg/m^3 NIOSH TWA 3.0 mg/m^3 STEL; skin
HMX (cyclotetramethylene tetranitramine; octogen)	2691-41-0	As required	n/a	n/a	n/a
PETN (pentaerythritol tetranitrate)	78-11-5	As required	n/a	n/a	n/a
Desensitizing Wax (* These exposure limits are for paraffin wax fume, similar to this material)		As required	n/a	2 mg/m^3 *	2 mg/m^3 * NIOSH

NOTE: Hazard Class 1, Division 1; SCG "D"

NOTE: Materials in this product are subject to the reporting requirements of SARA, Title III, Section 313 as follows:
None

SECTION III - PHYSICAL AND CHEMICAL DATA

Boiling Point: 464^{0}F (TNT explodes)
Specific Gravity: 1.5 minimum
Melting Point: TNT - 79^0-80^{0}C
Vapor Pressure (mm Hg): RDX/TNT - 0.1 @ 100^{0}C
Vapor Density (Air = 1): n/a
Evaporation Rate (Butyl Acetate = 1): n/a
Solubility In Water: 0.01% @ 68^{0}F (TNT)
Appearance And Odor: Cardboard tube containing tan to grayish-brown solid. No distinguishing odor.

SECTION IV - FIRE AND EXPLOSION HAZARDS

Flash Point: n/a
Flammable Limits: LEL n/a UEL n/a
Extinguishing Media: Water sprinkler or deluge system which is automatically activated.
Special Fire Fighting Procedures:

Do not attempt to fight fires involving high explosives. Isolate area and immediately evacuate all personnel from the area to a safe distance using as much protective cover as possible.

Unusual Fire And Explosion Hazards:

HIGH EXPLOSIVE!! The explosive materials are under confinement and may be caused to detonate by burning material surrounding the charges. Additional hazard would be secondary fragmentation.

SECTION V - REACTIVITY/COMPATIBILITY DATA

Stability:

Stable under normal conditions. Avoid subjecting to heat, sparks, impact, friction, and electrostatic discharge.

Incompatibility (materials to avoid):

Alkalis, alkoxides, and ammonia react with TNT to form dangerously sensitive compounds. Avoid contact with potassium hydroxide, sodium carbonate, sodium sulfide, and potassium methylate. Avoid alkalis, acids, strong oxidizers, ammonia, reducing agents, initiating explosives, and physical sensitizers such as glass, sand, and metal fragments.

Hazardous Decomposition Products:

Toxic, avoid inhalation and ingestion. During decomposition, emits toxic oxides of nitrogen, carbon dioxide, carbon monoxide.

Hazardous Polymerization:

Will not occur

SECTION VI - HEALTH HAZARD DATA

NOTE: Under normal conditions of handling, the cast booster should not pose a serious health threat except possibly through post-detonation fumes.

Routes Of Entry:

Eye?	Unlikely
Inhalation?	Yes (post-detonation fumes)
Skin?	Unlikely
Ingestion?	Yes (post-detonation fumes)

Effects Of Over-Exposure:

Acute -	Slight to serious effects
Chronic -	Not fully known

Signs And Symptoms Of Exposure:

Post-detonation fumes are toxic. NOTE: The following information is for the explosives constituents - Can cause allergic skin reaction and irritation to mucous membranes. Excessive exposure may cause convulsions, unconsciousness, headache, dizziness, flushing of skin, vomiting, fall in blood pressure, and methemoglobinemia. Inhalation and ingestion can result in systemic poisoning, usually affecting the bone marrow and the liver. Excessive exposure to TNT can cause liver damage; jaundice; cyanosis; sneezing; coughing and sore throat; peripheral neuropathy; muscular pain; kidney damage; cataracts; leukocytosis (increased blood leukocytes); cardiac irregularities; anorexia; nausea and vomiting; blood damage; and aplastic anemia. TNT can be absorbed through skin. Skin, hair, and nails may be stained yellow. Avoid inhalation and ingestion of dust, fumes, mist, or vapors.

Medical Conditions Generally Aggravated By Exposure:

Cardiovascular diseases, glaucoma, and liver, blood, and kidney disorders. Personnel should be in generally good health

SECTION VI - HEALTH HAZARD DATA (cont.)

Emergency First Aid Procedures:

Eye -	Flush with water for 15 minutes. Remove contact lenses prior to flushing, if applicable. Get medical attention.
Inhalation -	Remove to fresh air. Give oxygen if necessary. Get medical attention.
Skin -	Wash with soap and warm water. Get medical attention for rash or irritation.
Ingestion -	If conscious, drink large quantities of water and induce vomiting immediately. Contact a physician or Poison Control Center immediately.
Other -	Accidental detonation may result in severe personal injury. Provide first aid as applicable and obtain medical attention immediately.

Carcinogenicity:

NTP?	Not listed
IARC Monographs?	Not listed
OSHA Regulated?	Not listed

NOTE: Per EPA-C: cyclonite and trinitrotoluene - possible human carcinogen

SECTION VII - PRECAUTIONS FOR SAFE HANDLING AND USE

Steps To Follow If Material Is Spilled Or Released:

Remove all sources of ignition and avoid any and all situations which could initiate the material, such as heat and/or shock, sparks, impact, friction, or electrostatic discharge. Wet down material with water. Sweep up spill with a soft bristle brush and a non-sparking pan or shovel. Place material in a properly labeled storage container and store in an approved storage magazine for further disposition.

Waste Disposal Method:

Dispose of in accordance with applicable local, state, and federal regulations.

Precautions To Be Taken In Handling And Storage:

Handle with care. Store only in authorized High Explosives magazine with compatible material and away from all sources of ignition and flammable materials. Do not store with detonators or initiating (Primary) explosives.

Other Precautions:

Accurate's cast booster is UNO Class 1.1 hazardous material and the storage compatibility group (SCG) is D. Material should remain in original shipping container or equivalent for storage purposes.

SECTION VIII - PERSONAL PROTECTION INFORMATION

Respirator Protection (Specify Type):

Under normal handling, none required.

Ventilation:

Local Exhaust -	Under normal handling, none required.
Mechanical (General) -	Under normal handling, none required.
Special -	n/a
Other -	n/a

Protective Gloves:

Under normal handling, none required.

Eye Protection:

Safety glasses or goggles that meet or exceed ANSI Z87.1 (latest revision)

Other Protective Clothing Or Equipment:

Hearing protection should be worn when detonating unit.

Work/Hygienic Practices:

n/a

SECTION IX - SPECIAL PRECAUTIONS

Precautions To Be Taken:

CAUTION: High explosives are extremely dangerous. When initiated, the cast booster detonates producing a severe blast overpressure with the possibility of secondary fragments from the surface which the charge is placed against. The cast boosters should be handled only by qualified personnel who are experienced and highly trained in the use of and familiar with the hazards inherent with this product. When the cast booster is detonated or destructively tested, all personnel must be protected from the effects of blast overpressure and fragmentation. Allow the post-detonation fumes and dust to clear prior to entering the area. Follow all safety regulations and precautions when handling, storing, or processing explosive material.

The information contained herein is believed to be accurate and represents the best information currently available. Accurate Energetic Systems, LLC makes no warranties or guarantees with respect to the safety or suitability of this product or the results obtained, either expressed or implied. Buyer and user assume any and all risk, responsibility, and liability for any and all injury (including death), loss, or damage arising from usage.

Material Safety Data Sheet

Preparation Date: 09-Aug-2007 **Revision Date:** 29-Oct-2007 **Revision Number:** 2

SECTION 1 - PRODUCT AND COMPANY IDENTIFICATION

Supplier(s):
Orica Canada Inc.
Maple Street
Brownsburg, QC
For MSDS Requests: 450-533-4201

Orica USA Inc.
33101 E. Quincy Avenue
Watkins, CO 80137-9406
For MSDS Requests: 1-303-268-5000

Manufacturer:
BST Manufacturing, Inc.
924 Hawaii Avenue
Minden, LA. 71055
(318) 382-1226

Product Name: **Pentex™ & BST™ Cast Boosters**
Product Code: 20083
Alternate Name(s): BST™MPB, BST™-D, Pentex™, Pentex™ AP, Pentex™ SB, Pentex™ -D, Pentex™ CD, BSX and Osx 8™ Seismic Boosters, Osx 8 - L™ Seismic Boosters, Pentex™ SL
UN-No: UN0042
Recommended Use: Used for initiation of explosive mixtures.

Emergency Telephone Number: FOR CHEMICAL EMERGENCIES (24 HOUR) INVOLVING TRANSPORTATION, SPILL, LEAK, RELEASE, FIRE OR ACCIDENTS: IN CANADA AND US CALL THE ORICA TRANSPORTATION EMERGENCY RESPONSE SYSTEM AT **1-877-561-3636**. IN THE U.S. FOR LOST, STOLEN OR MISPLACED EXPLOSIVES CALL: BATF **1-800-800-3855**. FORM ATF F 5400.0 MUST BE COMPLETED AND LOCAL AUTHORITIES (STATE/MUNICIPAL POLICE, ETC.) MUST BE ADVISED.

SECTION 2 - HAZARD IDENTIFICATION

Emergency Overview:
Danger. Risk of explosion by shock, fire or other sources of ignition. Irritating to eyes, respiratory system and skin.

Appearance:	Physical State:	Odor:
Tan to brown	Solid	None

SECTION 3 - COMPOSITION/ INFORMATION ON INGREDIENTS

Chemical Name	CAS-No	Weight %
2,4,6- Trinitrotoluene (TNT)	118-96-7	30-90
Cyclotrimethylene Trinitramine (RDX)	121-82-4	10-70
Pentaerythritol tetranitrate (PETN)	78-11-5	0–60
Aluminum	7429-90-5	0-10

SECTION 4 - FIRST AID MEASURES

General advice: Not applicable; this is a packaged product that will not result in exposure to the contents under normal conditions of use. In the event of contact, administer first aid appropriate for symptoms present

Eye contact: Rinse thoroughly with plenty of water for at least 15 minutes and consult a physician

Skin contact: Wash off immediately with soap and plenty of water, removing all contaminated clothes and shoes.

SECTION 4 - FIRST AID MEASURES

Inhalation: Move victim to fresh air. Give artificial respiration ONLY if breathing has stopped. Give cardiopulmonary resuscitation (CPR) if there is no breathing AND no pulse. Obtain medical advice IMMEDIATELY

Ingestion: Rinse mouth. Harmful if swallowed. Seek medical attention IMMEDIATELY.

Notes to physician: No information available.

SECTION 5 - FIRE-FIGHTING MEASURES

Flammable properties: Product burns if ignited, with possible transition to detonation. May ignite or explode if heated under confinement.

Suitable extinguishing media: DO NOT FIGHT FIRES INVOLVING EXPLOSIVES. Evacuate surrounding areas. When controlling fire before involvement of explosives, fire-fighters should wear positive pressure self-contained breathing apparatus (SCBA) and full turnout gear. Water may be applied through fixed extinguishing system (sprinklers) as long as people need not be present for the system to operate. Water may be used on small fires.

Unsuitable extinguishing media: DO NOT FIGHT FIRES INVOLVING EXPLOSIVES. Attempts to smother a fire involving this product will be ineffective as it is its own oxygen source. Smothering this product could lead to decomposition and explosion. This product is more sensitive to detonation if contaminated with organic or oxidizable material or if heated while confined. Unless the mass of product on fire is flooded with water, re-ignition is possible.

Specific hazards arising from the chemical: DO NOT FIGHT FIRES INVOLVING EXPLOSIVE MATERIALS. Immediately evacuate all personnel from the area to a safe distance. Guard against re-entry. This product is a high explosive with a mass detonation hazard.

Protective equipment and precautions for firefighters: As in any fire, wear self-contained breathing apparatus pressure-demand, NIOSH approved (or equivalent) and full protective gear

SECTION 6 - ACCIDENTAL RELEASE MEASURES

Methods for containment: No information available.

Methods for cleaning up: Not required. If detonators are damaged, contact an Orica Canada Inc. or Orica USA Inc. technical representative.

SECTION 7 - HANDLING AND STORAGE

Handling: This product is an explosive and should only be used under the supervision of trained personnel. Protect containers from physical damage. Keep away from incompatible materials, heat, sparks, flames and other ignition sources. Avoid rough handling.

Storage: Store under moderate temperatures recommended by a technical services representative. Store under dry conditions in a well ventilated magazine that has been approved for either detonator storage or explosive storage. Do NOT store explosives in a detonator magazine or detonators in an explosive magazine. Keep away from heat, sparks and flames. Keep containers closed. Explosives should be kept well away from initiating explosives; protected from physical damage; separated from oxidizing materials, combustibles, and sources of heat. Keep away from incompatibles. Storage Temperature: It is recommended that detonators not be stored or used at temperatures exceeding 70 °C (158 °F) without approved procedures to address the elevated temperatures.

SECTION 8 - EXPOSURE CONTROLS / PERSONAL PROTECTION

Chemical Name	ACGIH TLV	OSHA PEL	NIOSH IDLH
2,4,6- Trinitrotoluene (TNT)	TWA: 0.1 mg/m^3 Skin	TWA: 1.5 mg/m^3 Skin	

Engineering Measures: Full-handling precautions should be taken at all times.

Personal Protective Equipment

Eye/face protection: Safety glasses with side-shields are recommended to prevent eye contact.

Skin protection: Long sleeved clothing. Impervious gloves.
Respiratory protection: Be sure to use a NIOSH approved respirator or equivalent during post-detonation clean up operations.
Hygiene Measures: Handle in accordance with good industrial hygiene and safety practice

SECTION 9 - PHYSICAL AND CHEMICAL PROPERTIES

Appearance: Tan to brown
Physical State: Solid
pH: Not available
Flammable Limits (Upper): No data available

Explosion Power: No data available
Vapor Pressure: Not available
Partition Coefficient (n-octanol/water): No data available

Odor: None
Viscosity No information available
Melting Point/Range: 176°F
Flammable Limits (Lower): No data available
Specific Gravity: 1.5-1.6
Oxidizing Properties: No information available

SECTION 10 - STABILITY AND REACTIVITY

Stability: Unstable. Can explode from impact, heat or friction. PETN explodes at 190 - 210°C (374 - 410°F). Stable up to approximately 70°C.
Conditions to avoid: Keep away from heat, impact, and friction. Some cords have limited tensile strength and abrasion resistance. Refer to the Product Bulletin for proper applications and use procedures. Damaged cords can lead to misfired holes - potentially, the most hazardous of all blasting situations. Avoid abrasion of cord on hole collars or casing pipes.
Incompatible materials: Strong oxidizing agents, The PVC/polyethylene plastic or wax covering will, in time, be affected by diesel oil.
Hazardous decomposition products: Carbon oxide. Nitrogen oxides (NOx).

SECTION 11 - TOXICOLOGICAL INFORMATION

Acute Toxicity

Product Information: Decomposition products may be toxic.

Chemical Name	LD50 Oral	LD50 Dermal	LC50 Inhalation
2,4,6- Trinitrotoluene (TNT)	660 mg/kg Mouse 795 mg/kg Rat		
Pentaerythritol tetranitrate (PETN)	1660 mg/kg Rat		

Carcinogenicity: The ingredients of this product are not classified as carcinogenic by ACGIH (American Conference of Governmental Industrial Hygienists) or IARC (International Agency for Research on Cancer), not regulated as carcinogens by OSHA (Occupational Safety and Health Administration), and not listed as carcinogens by T\NTP (National Toxicology Program).

Irritation: Not applicable.
Corrosivity: Not applicable.

SECTION 12 - ECOLOGICAL INFORMATION

Chemical Name	Freshwater Algae	Freshwater Fish Data	Microtox Data	Water Flea Data	log POW
2,4,6- Trinitrotoluene					1.5 mg/L

SECTION 13 - DISPOSAL CONSIDERATIONS

Waste Disposal Method: Burn under supervision of an expert at a government-approved explosive burning ground or destroy, by detonation in boreholes, in accordance with applicable local, provincial and federal laws. Call upon the services of an Orica Canada Inc. or Orica USA Inc. technical representative.

Contaminated packaging No information available.

SECTION 14 - TRANSPORT INFORMATION

DOT Proper Shipping Name: Boosters, without detonator
Hazard Class/Division: 1.1D
UN-No: UN0042
Packing group: II
TDG Proper Shipping Name: Boosters, without detonator
Hazard Class/Division: 1.1D
UN-No: UN00042
Packing group: II

Transportation Emergency Telephone Number: 1-877-561-3636

SECTION 15 - REGULATORY INFORMATION

CANADIAN CLASSIFICATION: This product has been classified in accordance with the hazard criteria of the CPR (Controlled Products Regulations) and this MSDS contains all the information required by the CPR
WHMIS hazard class: This product is an explosive and is not regulated by WHMIS.
USA CLASSIFICATION:

SARA Regulations Sections 313 and 40 CFR 372: No reportable components present.
SARA 311/312 Hazardous Categorization
Acute Health Hazard: Yes
Fire Hazard: Yes
Sudden Release of Pressure Hazard: Yes
Ozone Protection and 40 CFR 42: No reportable quantities of ozone depleting agents
Other Regulations/Legislations which apply to this product: No information available

TSCA: Complies **DSL:** Complies **NDSL:** Complies
The components in the product are on the following International Inventory lists:

Chemical Name	TSCA:	DSI:	NDSI:	ENCS	EINECS	ELINCS	CHINA	KECI	PICCS	AICS
2,4,6- Trinitrotoluene (TNT)	X	X	-	X	X	-	X	X	X	X
Cyclotrimethylene Trinitramine (RDX)	-	-	-	-	-	-	-	-	-	-
Pentaerythritol tetra nitrate (PETN)	X	X	-	X	X	-	-	X	-	X

Legend: X - Listed

SECTION 16 - OTHER INFORMATION

Prepared By: Safety Health & Environment
303-268-5000

Preparation Date: 09-Aug-2007
Revision Date: 29-Oct-2007

The information contained herein is offered only as guide to the handling of this specific material and has been prepared in good faith by technically knowledgeable personnel. It is not intended to be all-inclusive and the manner and conditions of use and handling may involve other and additional considerations. No warranty of any kind is given or implied and Orica will not be liable for any damages, losses, injuries or consequential damages which may result from the use of or reliance on any information contained herein

End of MSDS

DYNO
Dyno Nobel

MATERIAL SAFETY DATA SHEET
DYNO NOBEL INC.
11TH FLOOR CROSSROADS TOWER
SALT LAKE CITY, UTAH 84144
PHONE: 801-364-4800 FAX: 801-328-6452
E-MAIL: DNNA.HSE@AM.DYNONOBEL.COM
FOR 24 HOUR EMERGENCY CALL 800-424-9300

MSDS# 1030

DATE: 12/05/03

Supersedes MSDS
1030 01/24/03

SECTION I - PRODUCT IDENTIFICATION

Trade Name(s): DYNO® AP, DYNO® AP PLUS, DYNO® AP PLUS LD
DYNO® MC, DYNO® MC PLUS
DYNO® SL, DYNO® SL PLUS
DYNO® XTRA
IRECOAL® E-5 / DYNO® E5
IREMITE® TX / DYNO® TX
POWERMITE®
POWERMITE® AP, POWERMITE® SL, POWERMITE® PLUS
POWERMITE® SL PLUS
POWERMITE® LD, POWERMITE® LD PLUS
POWERMITE® Canadian
POWERMITE® RAISE BOMB™
DX 1004

Product Class: Packaged Emulsion Explosives

Product Appearance & Odor: White or pink opaque semi-solid, which will appear gray if product contains aluminum. Little or no odor. Typically paper or plastic chub packaging.

DOT Hazard Shipping Description: Explosive, Blasting, Type E 1.1D UN0241 II

NFPA Hazard Classification: Not Available (See Section IV - Special Fire Fighting Procedures)

SECTION II - HAZARDOUS INGREDIENTS

Ingredients	CAS#	% (Range)	TLV-ACGIH
Ammonium Nitrate	6484-52-2	60-80	No Value Established
Sodium Nitrate	7631-99-4	10-18	No Value Established
Aluminum	7429-90-5	0-10	10 mg/m^3
Mineral Oil (mist)	64742-35-4	0-3	5 mg/m^3

Ingredients, other than those mentioned above, as used in this product are not hazardous as defined under current Department of Labor regulations.

SECTION III - PHYSICAL DATA

Boiling Point: Not Applicable

Vapor Pressure: Not Applicable

Vapor Density: (Air = 1) Not Applicable

Density: 0.95-1.25 g/cc

Percent Volatile by Volume: <20 (water)

Solubility in Water: Product partiallydissolves very slowly in water.

Evaporation Rate (Butyl Acetate = 1): <1

SECTION IV - FIRE AND EXPLOSION HAZARD DATA

Flash Point: >100°C

Flammable Limits: Not Applicable

Extinguishing Media: (See Special Fire Fighting Procedures section.)

Special Fire Fighting Procedures: Do not attempt to fight fires involving explosive materials. Evacuate all personnel to a predetermined safe location, no less than 2,500 feet in all directions.

Unusual Fire and Explosion Hazards: Can explode or detonate under fire conditions. Burning material may produce toxic vapors.

SECTION V - HEALTH HAZARD DATA

Effects of Overexposure

Eyes: May cause irritation, redness and tearing.

Skin: Prolonged contact may cause irritation.

Ingestion: Large amounts may be harmful if swallowed.

Inhalation: Not a likely route of exposure.

Systemic or Other Effects: None known.

Emergency and First Aid Procedures

Eyes: Irrigate with running water for at least fifteen minutes. If irritation persists seek medical attention.

Skin: Remove contaminated clothing. Wash with soap and water.

Ingestion: Seek medical attention.

Inhalation: If irritation occurs, remove to fresh air.

Special Considerations: None.

SECTION VI - REACTIVITY DATA

Stability: Stable under normal conditions, may explode when subjected to fire, supersonic shock or high-energy projectile impact, especially when confined or in large quantity.

Conditions to Avoid: Keep away from heat, flame, ignition sources and strong shock.

Materials to Avoid (Incompatibility): Corrosives (strong acids and strong bases or alkalis).

Hazardous Decomposition Products: Nitrogen Oxides (NO_X), Carbon Monoxide (CO)

Hazardous Polymerization: Will not occur.

SECTION VII - SPILL OR LEAK PROCEDURES

Steps to be taken in Case Material is Released or Spilled: Protect from all ignition sources. In case of fire evacuate area not less than 2,500 feet in all directions. Notify authorities in accordance with emergency response procedures. Only personnel trained in emergency response should respond. If no fire danger is present, and product is undamaged and/or uncontaminated, repackage product in original packaging or other clean DOT approved container. Ensure that a complete account of product has been made and is verified. Follow applicable Federal, State, and local spill reporting requirements.

Waste Disposal Method: Disposal must comply with Federal, State and local regulations. If product becomes a waste, it is potentially regulated as a hazardous waste as defined under the Resource Conservation and Recovery Act (RCRA) 40 CFR, part 261. Review disposal requirements with a person knowledgeable with applicable environmental law (RCRA) before disposing of any explosive material.

SECTION VIII - SPECIAL PROTECTION INFORMATION

Ventilation: Not required for normal handling.

Respiratory Protection: None normally required.

Protective Clothing: Gloves and work clothing that reduce skin contact are suggested.

Eye Protection: Safety glasses are recommended.

Other Precautions Required: None.

SECTION IX - SPECIAL PRECAUTIONS

Precautions to be taken in handling and storage: Store in cool, dry, well-ventilated location. Store in compliance with Federal, State and local regulations. Keep away from heat, flame, ignition sources and strong shock.

Precautions to be taken during use: Avoid breathing the fumes or gases from detonation of explosives. Use accepted safe industry practices when using explosive materials. Unintended detonation of explosives or explosive devices can cause serious injury or death.

Other Precautions: It is recommended that users of explosive materials be familiar with the Institute of Makers of Explosives Safety Library Publications.

SECTION X - SPECIAL INFORMATION

The reporting requirements of Section 313 of Title III of the Superfund Amendments and Reauthorization Act of 1986 and 40 CFR 372 may become applicable if the physical state of this product is changed to an aqueous solution. If an aqueous solution of this product is manufactured, processed, or otherwise used, the nitrate compounds category and ammonia listing of the previously referenced regulation should be reviewed.

Material Safety Data Sheet

Dyno Nobel Inc.
2650 Decker Lake Boulevard, Suite 300
Salt Lake City, Utah 84119
Phone: 801-364-4800 Fax: 801-321-6703
E-Mail: dnna.hse@am.dynonobel.com
FOR 24 HOUR EMERGENCY, CALL CHEMTREC (USA) 800-424-9300
CANUTEC (CANADA) 613-996-6666

MSDS # 1124
Date 01/24/05

Supercedes
MSDS # 1124 10/20/04

SECTION I - PRODUCT IDENTIFICATION

Trade Name(s): NONEL® LEAD LINE

Product Class: Shock Tube

Product Appearance & Odor: Hollow plastic tubing (normally yellow) with dusty inner coating of HMX and aluminum. No detectable odor.

DOT Hazard Shipping Description: Articles, explosive, n.o.s. (HMX) 1.4S UN0349 II.
For 10,000 ft spools with Wire Lock Terminations only, Not regulated as an explosive, 0000

NFPA Hazard Classification: Not Applicable (See Section IV - Special Fire Fighting Procedures)

SECTION II - HAZARDOUS INGREDIENTS

			Occupational Exposure Limits	
Ingredients:	CAS#	% (Range)	OSHA PEL-TWA	ACGIH TLV-TWA
Cyclotetramethylene Tetranitramine (HMX)	2691-41-0	0.35	None[1]	None[2]
Aluminum (dust)	7429-90-5	0.04	15 mg/m^3 (total) 5 mg/m^3 (respirable)	10 mg/m^3

[1] Use limit for particulates not otherwise regulated (PNOR): Total dust, 15 mg/m^3 ; respirable fraction, 5 mg/m^3.
[2] Use limit for particulates not otherwise classified (PNOC): Inhalable particulate, 10 mg/m^3 ; respirable part., 3 mg/m^3.
Note: The above hazardous dust mixture is present at approximately 15 mg per meter of tubing.

Ingredients, other than those mentioned above, as used in this product are not hazardous as defined under current Department of Labor regulations, or are present in deminimus concentrations (less than 0.1% for carcinogens, less than 1.0% for other hazardous materials).

SECTION III - PHYSICAL DATA

Boiling Point: Not Applicable
Vapor Density: Not Applicable
Melting Point: HMX decomposes violently at melting pt., about 278°C
Evaporation Rate (Butyl Acetate = 1): Not Applicable
Vapor Pressure: Not Applicable
Density: Not Applicable
Solubility in Water: Not Soluble
Percent Volatile by Volume: Not Applicable

SECTION IV - FIRE AND EXPLOSION HAZARD DATA

Flash Point: Not Applicable
Flammable Limits: Not Applicable
Extinguishing Media: Water, inert powder, CO_2
Special Fire Fighting Procedures: For shock tube only, consider initial isolation of at least 15 meters (50 feet) in all directions. Fight fire with normal precautions and methods used for plastic fires from a reasonable distance. IF DETONATORS OR OTHER EXPLOSIVES ARE PRESENT, DO NOT FIGHT FIRE.
Unusual Fire and Explosion Hazards: May burn vigorously with localized detonations and projection of fragments, with effects usually confined to the immediate vicinity of packages. Toxic smoke from combustion of the plastic material may be emitted. If product functions, high heat and pressure are released from the end of the tube if not covered or enclosed, typically by a metal device.

SECTION V - HEALTH HAZARD DATA

Effects of Overexposure

This is a packaged product that will not result in exposure to hazardous ingredients (inner coating materials) under normal conditions of use.
Eyes: Not a likely route of exposure. Dust particles may be irritating.
Skin: Not a likely route of exposure. Dust particles may cause skin irritation.
Ingestion: Not a likely route of exposure. Ingestion of large amounts of the reactive powder (HMX) is poisonous and may cause cardiovascular collapse.
Inhalation: Not a likely route of exposure. Breathing dust can cause respiratory irritation. During manufacture and at processing temperatures, irritating fumes may evolve.
Systemic or Other Effects: None known.
Carcinogenicity: No constituents are listed by NTP, IARC or OSHA.

Emergency and First Aid Procedures

Eyes: Irrigate with running water for at least fifteen minutes. If irritation persists, seek medical attention.
Skin: Wash with soap and water.
Ingestion: Not Applicable
Inhalation: Not Applicable
Special Considerations: None.

SECTION VI - REACTIVITY DATA

Stability: Stable
Conditions to Avoid: Keep away from heat, flame, impact, friction, ignition sources and strong shocks. Also avoid stretching to failure.
Materials to Avoid (Incompatibility): Incompatible with strong oxidizers and acids.
Hazardous Decomposition or Combustion Products: Hazardous carbon monoxide (CO), nitrogen oxide (NO_X) gases and products of plastic decomposition produced.
Hazardous Polymerization: Will not occur.

SECTION VII - SPILL OR LEAK PROCEDURES

Steps to be taken in Case Material is Released or Spilled: Protect from all ignition sources. In case of fire evacuate area not less than 50 feet in all directions. Notify authorities in accordance with emergency response procedures. Only personnel trained in emergency response should respond. If no fire danger is present, repackage undamaged devices in original packaging, accounting for every device. If the ends or tube wall have been opened such that powder may have

been released from the tube, isolate the spill area. Contamination of the HMX/Aluminum powder with sand, grit or dirt will render the material more sensitive to detonation. Carefully wet down and clean "loose" powder spills using a damp sponge or rag, avoid applying friction or pressure to the explosive, and place in a (Velostat) electrically conductive bag. Follow applicable Federal, State, and local spill reporting requirements.

Waste Disposal Method: Disposal must comply with Federal, State and local regulations. If product becomes a waste, it is potentially regulated as a hazardous waste as defined under the Resource Conservation and Recovery Act (RCRA) 40 CFR, part 261. Review disposal requirements with a person knowledgeable with applicable environmental law (RCRA) before disposing of any explosive material.

SECTION VIII - SPECIAL PROTECTION INFORMATION

Ventilation: None normally required. Provide enhanced ventilation if used in underground mines, indoors or other enclosed areas.

Respiratory Protection: None normally required. Extended testing of the product indoors or in enclosed areas may necessitate respiratory protection.

Protective Clothing: None normally required. Wear chemical-resistant gloves during post-detonation cleanup or spill cleanup operations.

Eye Protection: Safety glasses or goggles are recommended for handling, testing or cleanup.

Other Precautions Required: None

SECTION IX - SPECIAL PRECAUTIONS

Precautions to be taken in handling and storage: Store in cool, dry, well-ventilated location. Store in compliance with Federal, State, and local regulations. Keep away from heat, flame, ignition sources and strong shock. Only properly qualified and authorized personnel should handle and use Shock Tube.

Precautions to be taken during use: Use accepted safe industry practices when using explosive materials. Unintended detonation of explosives or explosive devices can cause serious injury or death. Avoid breathing the fumes or gases from detonation of explosives. Detonation in confined or unventilated areas may result in exposure to hazardous fumes or oxygen deficiency.

Other Precautions: It is recommended that users of explosive materials be familiar with the Institute of Makers of Explosives Safety Library Publications.

SECTION X - SPECIAL INFORMATION

This product contains the following substances that are subject to the reporting requirements of Section 313 of Title III of the Superfund Amendments and Reauthorization Act of 1986 and 40 CFR Part 372.

Chemical Name	CAS Number	% By Weight
None		

Disclaimer

ORICA

Material Safety Data Sheet

Orica Canada Inc.
Maple Street
Brownsburg, PQ

Orica USA Inc.
33101 E. Quincy Avenue
Watkins, CO 80137

For MSDS Requests: 303-268-5000

EMERGENCY CONTACTS
FOR EMERGENCIES INVOLVING CHEMICAL SPILL OR RELEASE:
IN CANADA 1-877-561-3636 OR IN USA CHEMTREC AT 1-800-424-9300.

SECTION 1 - CHEMICAL PRODUCT AND COMPANY IDENTIFICATION

Product Name: **Bulk Shock Tubing** (EXEL Lead-In-Line, EXEL Shock tube (Bulk),

MSDS Number: 20015
Date Issued: 05-19-05

Product Use: Shock tube for nonelectric blast initiation

SECTION 2 - COMPOSITION / INFORMATION ON INGREDIENTS

HAZARDOUS INGREDIENT(S)	% (w/w)	ACGIH TWA	CAS NO.
Cyclotetramethylenetetranitramine (HMX) (Also known as Octogen)	0.2 – 0.4	Not Listed.	2691-41-0
Paint grade aluminium powder	0.02 – 0.04	5 mg/m3	7429-90-5

Polyolefin type resin used for tube construction considered to be non hazardous.

SECTION 3 - HAZARD IDENTIFICATION

Emergency Overview: The following information is the potential hazards associated with the pure ingredient of this product. It is our belief that, under conditions of normal occupational exposure, this product should not pose such hazards to the worker. Low acute toxicity. Read the entire MSDS for a more thorough evaluation of the hazards.

SECTION 4 - FIRST AID MEASURES

The hazardous materials are packaged inside the tubing in extremely small quantities. Exposure of the powder to personnel is extremely unlikely. However the following precautions are generally applicable.

General: If you feel unwell seek medical advice (show the product label where possible).
Inhalation: If respiratory problems arise, move the victim to fresh air. Give artificial respiration ONLY if breathing has stopped. Give cardiopulmonary resuscitation (CPR) if there is no breathing AND no pulse. Obtain medical advice IMMEDIATELY.
Skin Contact: Wash immediately with water followed by soap and water.
Eye Contact: Immediately flush eyes thoroughly for 5 minutes with running water. Hold eyelids open during flushing. If irritation persists, repeat flushing and obtain medical attention.
Ingestion: If victim is alert and not convulsing, rinse mouth out and give 200-300 mL (1 cup) of water to dilute material. DO NOT induce vomiting. Never give anything by mouth to an unconcious person. If spontaneous vomiting occurs, have victim lean forward with head positioned to avoid breathing in of vomitus, rinse mouth and administer more water. Obtain medical attention IMMEDIATELY.
Note to Physicians: Symptomatic. Treatment and supportive therapy as indicated.

SECTION 5 - FIRE- FIGHTING MEASURES

Flash Point: This product does not flash.
Flammable Limits (Lower): Not applicable.
Flammable Limits (Upper): Not applicable.

Auto Ignition Temperature: 349 Deg C (660.2 Deg F)
Decomposition Temperature: 300 Deg C (572 Deg F)
Rate of Burning: Burn rate is slow and typical of a polymer resin fire. The material will melt and will produce a molten pool fire. Black smoke will also be produced.
Explosive Power: Not applicable. Even when the tube burns the reactive material will not explode.
Sensitivity to Mechanical Impact: Completely insensitive to low velocity mechanical impact. High velocity super sonic (eg. Bullet) impact may cause initiation. Elastic recoil and supersonic impact following stretching line to breaking point can cause ignition of the tube. See case insert for more information.
Sensitivity to Static Discharge: Not expected to be sensitive to static discharge on the exterior of the tube.
Hazardous Reactions: See "Fire and Explosion Hazards"
Fire and Explosion Hazards: Ignites and burns on overheating. Fires can be fought. Treat as a polymer resin fire. The reactive material inside the tube is in such small quantity that it does not contribute significantly to the fire.
Extinguishing Media: Water may be used on fires.
Fire Fighting Procedures: As appropriate for surrounding materials / equipment.
Fire Fighting Protective Equipment: Use self-contained breathing apparatus and special protective clothing.
NOTE: Also see "Section 10 - Stability and Reactivity"

SECTION 6 - ACCIDENTAL RELEASE MEASURES

Spills, Leaks, or Releases: Collect for disposal.
Deactivating Chemicals: Not required.

SECTION 7 - HANDLING AND STORAGE

Handling: This product is sometimes considered an explosive under UN classifications and should only be used under the supervision of trained personnel. Follow appropriate regulations for storage. Use normal good industrial hygiene and housekeeping practices.
Storage Requirements: Store in a dry, well-ventilated area, away from heat sources and incompatibles.
Storage Temperature: Can be stored under the full climatic range –40 to 60 Deg. C (-40 to 140 Deg.F)

SECTION 8 - EXPOSURE CONTROLS / PERSONAL PROTECTION

PREVENTIVE MEASURES:
Recommendations listed in this section indicate the type of equipment that will provide protection against over exposure to this product. Conditions of use, adequacy of engineering or other control measures, and actual exposures will dictate the need for specific protective devices at your workplace.
Engineering Controls: General exhaust is acceptable.
PERSONAL PROTECTIVE EQUIPMENT:
Eye Protection: Safety glasses with side shields are recommended to prevent eye contact.
Skin Protection: Not required.
Respiratory Protection: A NIOSH/MSHA-approved respirator, if required.

EXPOSURE GUIDELINES FOR HAZARDOUS INGREDIENTS:
PRODUCT:
None established for product
EXPOSURE GUIDELINES FOR HAZARDOUS INGREDIENTS:
None established for hazardous ingredients.

SECTION 9 - PHYSICAL AND CHEMICAL PROPERTIES

Chemical Name: Not available.
Chemical Family: Initiating explosive device.
Molecular Formula: Not available.
Appearance: Solid with unspecified color.
Odour: None.
pH: Not applicable.
Vapour Pressure (mm Hg at 20°C/68°F): 0
Vapour Density (Air=1): Not applicable.
Boiling Point: Not applicable.
Melting Point: 115.6 Deg C (240.1 Deg F)

Solubility (Water): Negligible.
Solubility (Other): None
Specific Gravity: 0.9
Evaporation Rate: Not applicable.
Additional Properties: 0.9 g/cm3.

SECTION 10 - STABILITY AND REACTIVITY

Hazardous Decomposition Products: Thermal decomposition products are toxic and may include oxides of carbon and nitrogen.
Chemical Stability: Stable at room temperature.
Conditions to Avoid: High temperatures, sparks, open flames and all other sources of ignition.
Incompatibility with other Substances: None
Hazardous Polymerization: Will not occur.

SECTION 11 - TOXICOLOGICAL INFORMATION

Summary: The following information is the potential hazards associated with the pure ingredient of this product. It is our belief that, under conditions of normal occupational exposure, this product should not pose such hazards to the worker. This is a manufactured article and may release hazardous products during detonation.

TOXICOLOGICAL DATA:
PRODUCT:
None established for product.
INGREDIENTS:
Cyclotetramethylenetetranitramine:
Oral LD50 (rat) = 6490 mg/kg
Dermal LD50 (rabbit) = 630 mg/kg
Paint grade aluminium powder:

ALUMINUM POWDER

TOXIC EFFECTS DESCRIBED IN ANIMALS FROM SHORT EXPOSURES TO ALUMINUM POWDER BY INHALATION INCLUDE PULMONARY EFFECTS. HUMAN HEALTH EFFECTS FROM OVEREXPOSURE INHALATION, INGESTION, OR SKIN OR EYE CONTACT MAY INITIALLY INCLUDE TEMPORARY LUNG IRRITATION EFFECTS WITH COUGH, DISCOMFORT, DIFFICULTY BREATHING, OR SHORTNESS OF BREATH. CHRONIC AND EXCESSIVE EXPOSURES MAY LEAD TO CHRONIC LUNG DISORDERS WITH SYMPTOMS OF LUNG INSUFFICIENCY. INDIVIDUALS WITH PREEXISTING DISEASES OF THE LUNGS MAY HAVE INCREASED SUSCEPTIBILITY TO THE TOXICITY OF EXCESSIVE EXPOSURES. MEMBRANE AND UPPER RESPIRATORY TRACT IRRITATION MAY RESULT FROM LIBERATION OF ACID BY HYDROLYSIS. EXCESSIVE LEVEL OF ALUMINUM IN THE BRAIN HAS BEEN ASSOCIATED WITH SENILITY AND ALZHEIMER'S DISEASE.

POTENTIAL HEALTH EFFECTS:
Inhalation: Detonation products may be irritating. Detonation of large volumes of product in circumstances of confined space or poor ventilation may produce toxic levels of detonation products.
Skin Contact: No evidence of irritant effects from normal handling and use.
Eye Contact: Some evidence of minor eye irritation have been reported
Ingestion: Highly unlikely under normal industrial use. Irritant and can cause nausea and vomiting.
Subchronic Effects: None known.
Chronic Effects: None known.
Carcinogenicity: The ingredient(s) of this product is (are) not classified as carcinogenic by ACGIH (American Conference of Governmental Industrial Hygienists) or IARC (International Agency for Research on Cancer), not regulated as carcinogens by OSHA (Occupational Safety and Health Administration), and not listed as carcinogens by NTP (National Toxicology Program).
Mutagenicity: There is no evidence of mutagenic potential.
Reproductive Effects: No information is available and no adverse reproductive effects are anticipated.
Teratogenicity and Fetotoxicity: No information is available and no adverse teratogenic / embryotoxic effects are anticipated.
Synergistic Materials: None known.

SECTION 12 - ECOLOGICAL INFORMATION

Ecotoxicological Information: No information on this formulation.
Environmental Effects: Insufficient data.

SECTION 13 - DISPOSAL CONSIDERATIONS

Burn under supervision of an expert at an approved explosive burning ground or destroy, by detonation in boreholes, in accordance with applicable local, provincial and federal regulations. Call upon the services of an Orica Technical Representative.

SECTION 14 - TRANSPORT INFORMATION

TDG Name: ARTICLES, EXPLOSIVE, N.O.S.
TDG Class/Division: 1.4S or unclassified in some constructions
Product Indentification Number (PIN): UN0349
Packing Group: II
Transportation Emergency Telephone Number: 1-877-561-3636.

SECTION 15 - REGULATORY INFORMATION

CANADIAN CLASSIFICATION:
This product has been classified in accordance with the hazard criteria of the CPR (Controlled Products Regulations) and this MSDS (Material Safety Data Sheet) contains all the information required by the CPR.
Controlled Products Regulations (WHMIS) Classification: This product is an explosive and is not regulated by WHMIS.
CEPA / Canadian Domestic Substances List (DSL): The substance(s) in this product is/are on the Canadian Domestic Substances List (CEPA DSL).
IARC Classification: None of the components of this product are listed on IARC.
USA CLASSIFICATION:
OSHA Classification:
Physical: Not regulated.
Health: Not regulated.
Target Organ: None identified.
SARA Regulations Sections 313 and 40 CFR 372: This product does not contain any chemicals subject to reporting requirements.
Ozone Protection and 40 CFR 42: This product does not contain nor is it manufactured with ozone depleting substances.
Other Regulations/Legislation which apply to this product: New Jersey Right-to-Know.

SECTION 16 - OTHER INFORMATION

REFERENCES:
"CHEMINFO", through "CCINFOdisc", Canadian Centre for Occupational Health and Safety, Hamilton, Ontario, Canada.
"HSDB", through "CCINFOdisc", Canadian Centre for Occupational Health and Safety, Hamilton, Ontario, Canada.
"ChemAdvisor", through "CCINFOdisc", Canadian Centre for Occupational Health and Safety, Hamilton, Ontario, Canada. 1997.

Prepared by: Safety, Health and Environment (303) 268-5000.

ETI CANADA INC.

MATERIAL SAFETY DATA SHEET

SECTION 1 - PRODUCT IDENTIFICATION

HMIS HAZARD RATINGS:

HEALTH	= 1
FLAMMABILITY	= 1
REACTIVITY	= 2

KEY: 4 = SEVERE
3 = SERIOUS
2 = MODERATE
1 = SLIGHT
0 = MINIMAL

NAME: DRY BLASTING AGENTS

TRADE NAMES AND SYNONYMS:

ANFO ###	NILITE® WR ###
FRAGMAX™ ###	NBL ###
FRAGPAK™ ###	EL ###
LO-RITE ###	WATERBLOCK
	NILITE ###

- NUMBER, NAME AND/OR LETTER DESIGNATION FOR PRODUCTS

MANUFACTURER/DISTRIBUTOR:

GOLDEN STATE EXPLOSIVES
2901 STATE HWY. 16
PLYMOUTH, CA 95669
(800) 210-5786

ETI CANADA INC.
PO BOX 900
350 DUPONT ROAD
NORTH BAY, ONTARIO
P1B 8K2

PRODUCT INFORMATION PHONE: (705) 472-1300, EXT. 145

	USA	CANADA
TRANSPORTATION EMERGENCY PHONE: ("ONLY IN THE EVENT OF A CHEMICAL EMERGENCY INVOLVING A SPILL, LEAK, FIRE, EXPOSURE OR ACCIDENT")	(800) 424-9300	(705) 472-1300

SECTION 2 - HAZARDOUS COMPONENTS

CHEMICAL	CAS NUMBER	TLV
AMMONIUM NITRATE	6484-52-2	NONE ESTABLISHED
FUEL OIL	68476-30-2	NONE ESTABLISHED
ALUMINUM	7429-90-5	5 MG/M^3
GUAR	9000-30-0	NONE ESTABLISHED

NAME: DRY BLASTING AGENTS

SECTION 3 - TOXIC CHEMICALS NOTIFICATION PER 40 CFR 372

THIS PRODUCT CONTAINS THE FOLLOWING CHEMICALS THAT ARE SUBJECT TO THE REPORTING REQUIREMENTS OF SECTION 313 OF TITLE III OF THE SUPERFUND AMENDMENTS AND REAUTHORIZATION ACT OF 1986 AND 40 CFR PART 372:

CHEMICAL	CAS NUMBER	% BY WEIGHT
Ammonium Nitrate	6484-52-2	96 (MAX.)

SECTION 4 - PHYSICAL DATA

SPECIFIC GRAVITY:	0.8 - 1.1
FORM:	FREE-FLOWING SOLID
COLOR:	CREAMY WHITE, PINK, ORANGE, GREEN OR GRAY/BLACK
ODOR:	SLIGHT FUEL OIL

SECTION 5 - REACTIVITY DATA

STABILITY: UNSTABLE WITH HEAT AND SHOCK.

COMPATIBILITY: INCOMPATIBLE WITH ACIDS, ALKALIES, OXIDANTS.

DECOMPOSITION: DECOMPOSES WITH HEAT, SHOCK AND BY REACTION WITH ACIDS, ALKALIES, OXIDANTS. HAZARDOUS GASES PRODUCED ARE NITROGEN OXIDES.

POLYMERIZATION: WILL NOT OCCUR.

SECTION 6 - FIRE AND EXPLOSION HAZARD DATA

FIRE AND EXPLOSION DATA

WILL DETONATE IF SUITABLY PRIMED. CAN DETONATE WITH SEVERE IMPACT OR BY HEAT OR FLAME. HAZARDOUS GASES PRODUCED IN FIRE ARE NITROGEN OXIDES, SILICA AND ALUMINA FUMES. DOT CLASSIFICATION: BLASTING AGENT, N.O.S.

EXTINGUISHING MEDIA

WATER.

SPECIAL FIRE FIGHTING INSTRUCTIONS

DELUGE WITH WATER. DO NOT FIGHT LARGE FIRE. ISOLATE AREA. KEEP PERSONNEL REMOVED AND UPWIND OF FIRE.

SECTION 7 - HEALTH HAZARD INFORMATION

PRINCIPAL HEALTH HAZARDS

BLASTING AGENTS ARE MIXTURES AND HAVE NOT BEEN TESTED FOR TOXICITY. DETONATION MAY CAUSE SEVERE PHYSICAL INJURY, INCLUDING DEATH. OVEREXPOSURE TO THESE PRODUCTS BY INHALATION, EYE OR SKIN CONTACT OR INGESTION MAY CAUSE THE HEALTH EFFECTS DESCRIBED BELOW FOR THE COMPONENTS.

AMMONIUM NITRATE

A SKIN AND EYE IRRITANT.

HUMAN HEALTH EFFECTS FROM OVEREXPOSURE BY INHALATION, SKIN CONTACT OR INGESTION MAY INITIALLY INCLUDE SKIN IRRITATION WITH DISCOMFORT OR RASH; EYE IRRITATION WITH DISCOMFORT, TEARING OR BLURRING OF VISION; AND IRRITATION OF THE RESPIRATORY TRACT.

ALUMINUM POWDER

TOXIC EFFECTS DESCRIBED IN ANIMALS FROM SHORT EXPOSURES TO ALUMINUM POWDER BY INHALATION INCLUDE PULMONARY EFFECTS. HUMAN HEALTH EFFECTS FROM OVEREXPOSURE INHALATION, INGESTION, OR SKIN OR EYE CONTACT MAY INITIALLY INCLUDE TEMPORARY LUNG IRRITATION EFFECTS WITH COUGH, DISCOMFORT, DIFFICULTY BREATHING, OR SHORTNESS OF BREATH. CHRONIC AND EXCESSIVE EXPOSURES MAY LEAD TO CHRONIC LUNG DISORDERS WITH SYMPTOMS OF LUNG INSUFFICIENCY. INDIVIDUALS WITH PREEXISTING DISEASES OF THE LUNGS MAY HAVE INCREASED SUSCEPTIBILITY TO THE TOXICITY OF EXCESSIVE EXPOSURES. MEMBRANE AND UPPER RESPIRATORY TRACT IRRITATION MAY RESULT FROM LIBERATION OF ACID BY HYDROLYSIS. EXCESSIVE LEVEL OF ALUMINUM IN THE BRAIN HAS BEEN ASSOCIATED WITH SENILITY AND ALZHEIMER'S DISEASE.

FUEL OIL

A SKIN IRRITANT. TOXIC EFFECTS DESCRIBED IN ANIMALS FROM EXPOSURE BY INHALATION INCLUDE LIVER AND KIDNEY EFFECTS. IN A LIFETIME SKIN PAINTING STUDY IN MICE, NO.2 BURNER FUEL REPORTEDLY SHOWED WEAK CARCINOGENIC ACTIVITY. HUMAN HEALTH EFFECTS FROM OVEREXPOSURE BY INHALATION, EYE OR SKIN CONTACT OR INGESTION MAY INITIALLY INCLUDE SKIN IRRITATION WITH DISCOMFORT OR RASH; EYE IRRITATION WITH DISCOMFORT, TEARING OR BLURRING OF VISION; HEADACHES AND DIZZINESS MAY BE ANESTHETIC AND MAY CAUSE OTHER CENTRAL NERVOUS SYSTEM EFFECTS IF INHALED; IF INGESTED INTO THE LUNGS, MAY CAUSE SEVERE HEALTH EFFECTS (BRONCHOPNEUMONIA OR PULMONARY EDEMA).

NAME: DRY BLASTING AGENTS

SECTION 7 - HEALTH HAZARD INFORMATION (CONTD.)

NITROGEN OXIDE FUMES FROM DETONATION

NITROGEN OXIDES ARE SKIN, EYE AND RESPIRATORY SYSTEM IRRITANTS. SYSTEMIC TOXICITY RESULTING FROM OXIDATION OF LUNG TISSUE INCLUDES EMPHYSEMA, BRONCHITIS AND BRONCHO- PNEUMONIA. ACUTE EXPOSURE CAN LEAD TO DEATH FROM ASPHYXIA OR PULMONARY EDEMA. IN ANIMALS, NITROGEN OXIDE CAUSED METHEMOGLOBINEMIA, WAS NOT CARCINOGENIC, BUT CAUSED EMBRYOTOXICITY AND REPRODUCTIVE EFFECTS.

CARCINOGENICITY

NONE OF THE COMPONENT(S) OF THIS MATERIAL IS LISTED AS A CARCINOGEN BY NTP, IARC, OR OSHA.

EXPOSURE LIMITS

"TLV" (ACGIH):	NONE ESTABLISHED
PEL (OSHA):	NONE ESTABLISHED

SAFETY PRECAUTIONS

AVOID BREATHING VAPORS OR MIST. AVOID CONTACT WITH EYES AND SKIN. AVOID CONTACT WITH CLOTHING, WASH THOROUGHLY AFTER HANDLING. WASH CLOTHING AFTER USE.

FIRST AID

INHALATION

NOT A LIKELY ROUTE OF EXPOSURE. SEEK MEDICAL ATTENTION.

SKIN CONTACT

FLUSH SKIN WITH WATER. SEEK MEDICAL ATTENTION.

EYE CONTACT

IN CASE OF CONTACT, IMMEDIATELY FLUSH EYES WITH PLENTY OF WATER FOR AT LEAST 15 MINUTES. CALL A PHYSICIAN.

INGESTION

IF SWALLOWED, GIVE LARGE QUANTITIES OF WATER. NEVER GIVE ANYTHING BY MOUTH TO AN UNCONSCIOUS PERSON. CALL A PHYSICIAN.

NOTE: IF DETONATION CAUSES PHYSICAL INJURY, GET MEDICAL ATTENTION IMMEDIATELY. IF DETONATION FUMES ARE INHALED, REMOVE TO FRESH AIR. IF NOT BREATHING, GIVE ARTIFICIAL RESPIRATION, PREFERABLY MOUTH-TO-MOUTH. IF BREATHING IS DIFFICULT, GIVE OXYGEN. CALL A PHYSICIAN.

GENERALLY APPLICABLE CONTROL MEASURES AND PRECAUTIONS

USE ONLY WITH ADEQUATE VENTILATION. KEEP AWAY FROM HEAT, SPARKS AND FLAMES. KEEP CONTAINER IN A COOL PLACE. DO NOT MIX WITH ACIDS, ALKALIES, OXIDANTS. CONSULT "ALWAYS AND NEVERS" ON CASE INSERT SUPPLIED WITH PRODUCT. DO NOT CONSUME FOOD, DRINK OR TOBACCO IN AREAS WHERE THEY MAY BECOME CONTAMINATED WITH THIS MATERIAL.

NAME: DRY BLASTING AGENTS

SECTION 8 - PROTECTION INFORMATION

PERSONAL PROTECTIVE EQUIPMENT

COVERALL CHEMICAL SPLASH GOGGLES IF EYE CONTACT IS LIKELY. PROTECTIVE CLOTHING IF SPLASH IS LIKELY. IMPERVIOUS GLOVES, SUCH AS NEOPRENE, IF CONTACT WITH PRODUCT IS LIKELY.

SPILL, LEAK OR RELEASE

REVIEW FIRE AND EXPLOSION HAZARDS AND SAFETY PRECAUTIONS BEFORE PROCEEDING WITH CLEAN UP. USE APPROPRIATE PERSONAL PROTECTIVE EQUIPMENT DURING CLEAN UP.

DIKE SPILL. PREVENT THIS PRODUCT FROM ENTERING SEWERS, WATERWAYS OR LOW AREAS. CONTROL ACCESS TO AREA AND REMOVE SOURCES OF HEAT OR IMPACT. PICK UP BY HAND USING NON-SPARKING TOOLS. DO NOT USE POWER EQUIPMENT. RECOVER FOR USE AS LOWER QUALITY PRODUCT OR RECYCLE (WITH TECHNICAL ASSISTANCE) INTO BLEND PRODUCTS.

WASTE DISPOSAL

DO NOT BURN. WASTE TREATMENT, STORAGE, TRANSPORTATION AND DISPOSAL MUST BE IN ACCORDANCE WITH FEDERAL, STATE/PROVINCIAL AND LOCAL REGULATIONS. CONSULT AN EXPLOSIVES MANUFACTURER FOR SAFETY/TECHNICAL CONSIDERATIONS ASSOCIATED WITH DESTROYING EXPLOSIVE MATERIALS. DO NOT FLUSH TO SURFACE WATER OR SANITARY SEWER SYSTEM.

SECTION 9 - SHIPPING AND STORAGE INFORMATION

ANFO ###, FRAGMAX™ ###, FRAGPAK™ ###, LO-RITE ###, NBL ###, EL ###

	USA	CANADA
SHIPPING NAME:	EXPLOSIVE, BLASTING, TYPE B ALSO AMMONIUM NITRATE- FUEL OIL MIXTURE*	EXPLOSIVE, BLASTING, TYPE B
HAZARD CLASS:	1.5D	1.5D
UN/NA NO.:	UN 0331; ALSO NA 0331*, PGII	UN 0331, PGII
IMDG PAGE NO.:	1117	
LABEL(S):	EXPLOSIVE 1.5D	1.5D
PLACARD(S):	BLASTING AGENTS OR 1.5 BLASTING AGENT	1.5D

*DOMESTIC ONLY FOR ANFO, ANFO-P, ANFO-X AND ANFO-UG

NILITE® WR

SHIPPING NAME:	EXPLOSIVE, BLASTING, TYPE E	EXPLOSIVE, BLASTING, TYPE B
HAZARD CLASS:	1.5D	1.5D
UN/NA NO.:	UN 0332, PGII	UN 0331, PGII
IMDG PAGE NO.:	1117	
LABEL(S):	BLASTING AGENT 1.5D	1.5D
PLACARD(S):	BLASTING AGENTS OR 1.5 BLASTING AGENTS	1.5D

NAME: **DRY BLASTING AGENTS**

SECTION 9 - SHIPPING AND STORAGE INFORMATION (CONT'D)

SHIPPING INFORMATION - USA

SHIPPING INFORMATION DEPENDS ON PACKAGING AND PRODUCT CHARACTERISTICS. CHECK MANUFACTURER OR SHIPPER FOR SPECIFIC INFORMATION.

STORAGE CONDITIONS - USA

STORE IN WELL VENTILATED, COOL, APPROVED TYPE MAGAZINE. STORE IN ACCORDANCE WITH NATIONAL FIRE PROTECTION ASSOCIATION AND FEDERAL REGULATIONS. DO NOT STORE OR CONSUME FOOD, DRINK OR TOBACCO IN AREAS WHERE THEY MAY BECOME CONTAMINATED WITH THIS MATERIAL.

SHIPPING AND STORAGE INFORMATION - CANADA

TRANSPORT AND STORE ACCORDING TO CTC AND EXPLOSIVES ACT. ALSO REFER TO TRANSPORT CANADA'S PUBLICATION "EMERGENCY RESPONSE GUIDE TO DANGEROUS GOODS".

DATE OF LATEST REVISION: 3/98
PERSON RESPONSIBLE FOR MSDS: TECHNICAL
ADDRESS: ETI CANADA INC.
PO BOX 900
350 DUPONT ROAD
NORTH BAY, ONTARIO P1B 8K2

Material Safety Data Sheet

Dyno Nobel Inc.
2650 Decker Lake Boulevard, Suite 300
Salt Lake City, Utah 84119
Phone: 801-364-4800 Fax: 801-321-6703
E-Mail: dnna.hse@am.dynonobel.com
FOR 24 HOUR EMERGENCY, CALL CHEMTREC (USA) 800-424-9300
CANUTEC (CANADA) 613-996-6666

MSDS # 1020
Date 01/24/05

Supercedes
MSDS # 1020 07/20/04
1142L 01/23/04
1142H 01/23/04

SECTION I - PRODUCT IDENTIFICATION

Trade Name(s): Superprill™, Prilled Ammonium Nitrate, Industrial Grade
LoDAN, Ammonium Nitrate, Industrial Grade
HiDAN, Ammonium Nitrate, Agricultural Grade

Chemical Name: Ammonium Nitrate, NH_4NO_3

Synonyms: Prilled Ammonium Nitrate; Ammonium Nitrate: Industrial, Fertilizer or Agricultural Grade; AN; 35-0-0.

Product Appearance & Odor: White to off-white, solid prills or fine granules. Slight ammonia odor.

DOT Hazard Shipping Description: Ammonium Nitrate Based Fertilizers 5.1 UN2067 III Label: Oxidizer

NFPA Hazard Classification:

Health (Blue)	2
Flammability (Red)	0
Reactivity (Yellow)	3
Specific Hazard (White)	Oxidizer

HMIS (III) Classification:

Health	1
Flammability	1
Physical Hazard	3
PPE	E

SECTION II - HAZARDOUS INGREDIENTS

Ingredients:	CAS#	% (Range)	Occupational Exposure Limits ACGIH TLV-TWA	OSHA PEL-TWA
Ammonium Nitrate	6484-52-2	98 – 100%	None[1]	None[2]

[1] Use limit for particulates not otherwise regulated (PNOR): Total dust, 15 mg/m^3 ; respirable fraction, 5 mg/m^3 .
[2] Use limit for particulates not otherwise classified (PNOC): Inhalable particulate, 10 mg/m^3 ; respirable part., 3 mg/m^3 .

Ingredients, other than those mentioned above, as used in this product are not hazardous as defined under current Department of Labor regulations, or are present in deminimus concentrations (less than 0.1% for carcinogens, less than 1.0% for other hazardous materials).

SECTION III - PHYSICAL DATA

Boiling Point: Decomposes between 177-210°C (350-410°F)
Vapor Density: Not Applicable
Percent Volatile by Volume: Not Applicable
Evaporation Rate (Butyl Acetate = 1): Not Applicable
Vapor Pressure: Not Applicable
Density: 0.72 - 1.00 g/cc (Poured bulk density)
Solubility in Water: 192 g/100 ml @ 20°C (68°F)
118 g/100 ml @ 0°C (32°F)
Melting Point: 170°C (337°F)

SECTION IV - FIRE AND EXPLOSION HAZARD DATA

Flash Point: Not Applicable
Flammable Limits: Not Applicable
Extinguishing Media: Use water only. Do not attempt to smother. Do not use salt water, dry chemical, carbon dioxide, steam or foam.
Special Fire Fighting Procedures: Fight only small fires in initial stages when not confined. Immediately ventilate structures and transport containers to minimize confinement and prevent pressure buildup that increases the possibility of explosion. In advanced stage, or for any large fire or fire engulfing confining containers, abandon fire-fighting efforts and quickly evacuate all personnel to a safe distance of at least 2,500 feet. Use large quantities of water to cool. If possible, plug drains or dike channels to prevent either molten material or water runoff from entering storm drains or surface waters. Firefighters should wear self-contained breathing apparatus (SCBA) and full turnout gear.
Unusual Fire and Explosion Hazards: May explode or detonate under confinement and high temperatures. Ammonium nitrate emits toxic nitrogen oxides when heated to decomposition and will release ammonia to air upon reaction with strong alkalis. Explodes more readily if contaminated with organic materials or other fuels.

SECTION V - HEALTH HAZARD DATA

Carcinogenicity: **NTP: No** **IARC Monographs: No** **OSHA Regulated: No**

Effects of Overexposure

Not found to be toxic by oral, dermal and inhalation exposure as defined by OSHA.
Eyes: May cause irritation, redness, tearing or blurred vision.
Skin: Prolonged contact may irritate skin, resulting in reddening of the skin and possible dermatitis, or may aggravate pre-existing dermatitis.
Ingestion: May cause gastric irritation, abdominal spasms, nausea, pain and faintness. Large amounts may be harmful if swallowed, potentially causing systemic acidosis and methemoglobinemia.
Inhalation: Dust is irritating to mucous membranes and respiratory tract, and may cause sore throat, coughing, difficult breathing and severe lung congestion, and may also aggravate pre-existing lung conditions. Inhalation may also lead to ingestion effects. Delayed reactions may result in pulmonary edema and chemical pneumonitis.
Systemic or Other Effects: Decomposition of ammonium nitrate at high temperatures produces highly toxic Nitrogen Oxides (NO_X). High level exposure to NO_X can cause serious injury or death. Chronic exposure to NO_X can produce respiratory and/or kidney damage.

Emergency and First Aid Procedures

Eyes: Irrigate with running water for at least fifteen minutes. If irritation persists, seek medical attention.
Skin: Remove contaminated clothing. Wash with soap and water.
Ingestion: Seek medical attention. Do not induce vomiting. Treat for methemoglobinemia.
Inhalation: Remove to fresh air, seek medical attention.
Special Considerations: If an exposure to toxic NO_X vapors occurs, restore or support breathing as necessary, seek immediate medical attention. Observe for delayed reactions to NO_X exposure that may involve pulmonary edema.

SECTION VI - REACTIVITY DATA

Stability: Stable under normal conditions. May explode when subjected to fire, supersonic shock or high-energy projectile impact, especially when confined or in large quantities.
Conditions to Avoid: Keep away from heat, flame, ignition sources and strong shock.
Materials to Avoid (Incompatibility): Flammable liquids, organic solvents and materials, explosives, metal powders and other combustible materials. Reducing agents, chlorides, phosphorus and sulfur. Corrosives (strong acids and bases).
Hazardous Decomposition Products: Nitrogen Oxides (NO_X), Ammonia (NH_3), Nitric Acid (HNO_3).
Hazardous Polymerization: Does not occur.

SECTION VII - SPILL OR LEAK PROCEDURES

Steps to be taken in Case Material is Released or Spilled: Protect from all ignition sources. In case of large fire or fire engulfing containers, evacuate an area not less than 2,500 feet in all directions. If possible, plug drains or dike channels to prevent either molten material or water runoff from entering storm drains or surface water. Notify authorities in accordance with emergency response procedures. Only personnel trained in emergency response should respond. If no fire danger is present, and product is undamaged and/or uncontaminated, repackage product in original packaging or other clean DOT approved container. Ensure that a complete account of product has been made and is verified. Follow applicable federal, state, and local spill reporting requirements. Contact of this product with water may result in a reportable release.
Waste Disposal Method: Disposal must comply with Federal, State and local regulations. Ammonium Nitrate is used as a fertilizer and, in some cases, recovered material may be put to beneficial use. If product becomes a waste, it is potentially regulated as a hazardous waste as defined under the Resource Conservation and Recovery Act (RCRA) 40 CFR, part 261. Review disposal requirements with a person knowledgeable with applicable environmental law (RCRA) before disposing of any hazardous material.

SECTION VIII - SPECIAL PROTECTION INFORMATION

Ventilation: Not required for normal handling. Provide adequate ventilation as needed to avoid exceeding exposure limits for nuisance dust, especially in confined spaces.
Respiratory Protection: Wear NIOSH approved respirator when airborne exposure limits for nuisance dust are exceeded. Refer to OSHA standard 1910.134 for proper selection and use of respirators.
Protective Clothing: Wear long sleeved clothing and protective gloves to prevent prolonged and repeated skin contact.
Eye Protection: Safety glasses with side shields or chemical goggles are recommended. Eye baths should be provided when direct eye contact is likely.
Other Precautions Required: None.

SECTION IX - SPECIAL PRECAUTIONS

Precautions to be Taken in Handling and Storage: Store in cool, dry, non-combustible buildings and avoid contamination. Automatic sprinklers are appropriate. Keep separate from other chemicals and combustible materials. Refer to applicable fire and building codes.
Empty containers may contain residue and can be dangerous. Do not pressurize, cut, weld, braze, solder, drill, grind or expose such containers to heat, flames, sparks or other sources of ignition without first thoroughly decontaminating the containers; they may evolve poisonous gas and cause injury or death.
Other Precautions: Drains in storage area should be plugged to prevent entry of molten material during fire conditions.

SECTION X - SPECIAL INFORMATION

EPCRA Section 311/312 Hazard Categorization

Acute	Chronic	Fire	Pressure	Reactive
X		X		

The reporting requirements of Section 313 of Title III of the Superfund Amendments and Reauthorization Act of 1986 and 40 CFR 372 may become applicable if the physical state of this product is changed to an aqueous solution. If an aqueous solution of this product is manufactured, processed, or otherwise used, the nitrate compounds category and ammonia listing of the previously referenced regulation should be reviewed.

Slightly toxic to aquatic organisms as defined by USEPA.

Disclaimer

E113
E113A

Material Safety Data Sheet

SEC Investments Corp. LLC.
5700 N. Portland, Suite 301 / Oklahoma City, OK 73112 / Phone: (405) 947-0765 / Fax: (405) 947-0768

SECTION 1 - PRODUCT INFORMATION	
TRADE NAME:	E113
SYNONYM:	AMPEX
CHEMICAL FAMILY:	Emulsion Explosive
FORMULA:	Mixture
CAS NUMBER:	None
UN/NA NUMBER:	UN0332
DOT HAZARD CLASS:	Explosive, Blasting, Type E, Class 1.5 D

SECTION 2 - HEALTH ALERT

DANGER - If misused or disposed of improperly, material could explode and cause death or serious injury.
DO NOT HANDLE WHEN IN DOUBT!!
See section VIII - Personal Protection
CHEM-TEL, INC. (800) 255-3924.

SECTION 3 - HEALTH HAZARD INFORMATION

EYE May cause moderate irritation.
SKIN: May cause moderate irritation characterized my redness and/or rash.
INHALATION: Inhalation of decomposed products may irritate the respiratory tract. Prolonged exposure to these fumes may result in respiratory difficulties (shortness of breath, etc.) and possibly more severe toxic effects.
INGESTION: Swallowing large quantities may cause toxicity characterized by dizziness, bluish skin coloration, methemoglobinemia, unconsciousness, abdominal spasms, nausea, and pain. Constituents can cause iodine uptake inhibition in the thyroid – this is not normally significant unless long term exposure at fairly high levels (not likely to occur in emulsified form) occurs. Avoid ingestion.

SECTION 4 - EMERGENCY AND FIRST AID PROCEDURES

EYE CONTACT: Flush with large amounts of water. Seek medical aid.
SKIN CONTACT: Remove contaminated clothing. Wash skin thoroughly with soap and water.
INHALATION: Remove from exposure. If breathing stops or is difficult, administer artificial respiration or oxygen. Seek medical aid.
INGESTION: Give 8-16 oz. of milk or water. Induce vomiting. Seek medical aid.

SECTION 5 - RECOMMENDED OCCUPATIONAL EXPOSURE LIMIT/ HAZARDOUS INGREDIENTS
EXPOSURE LIMIT (PRODUCT): None required for product.

HAZARDOUS INGREDIENTS:	PERCENT	EXPOSURE LIMIT	CAS NO.
Ammonium Nitrate	70-90	Not Listed. No value established	6484-52-2
Micro-balloons	<5%	10 mg/m3 (nuisance dust)	65997-17-3

NOTE: All ingredients are present in an emulsion matrix and individual hazard may not be present in this formulation.

SECTION 6 - REACTIVITY DATA

CONDITIONS CONTRIBUTING TO INSTABILITY: Heat (confinement); Stacking (burning).
INCOMPATIBILITY: Can react violently or explode, with reducing agents and organic materials. Avoid amines, strong alkalis & acids. HAZARDOUS REACTION / DECOMPOSITION PRODUCTS: At high temperatures, especially >374°F, may emit severe toxic fumes of nitrogen oxides and oxides of carbon.
CONDITIONS CONTRIBUTING TO HAZARDOUS POLYMERIZATION: Not applicable.

SECTION 7 - FIRE AND EXPLOSION HAZARD INFORMATION

FLASH POINT & METHOD: NA
AUTO IGNITION TEMPERATURE: Explodes
FLAMMABLE LIMITS (% BY VOLUME/AIR): LOWER: NA UPPER: NA
EXTINGUISHING MEDIA: Water

E113/E113A

Material Safety Data Sheet

SECTION 7 - FIRE AND EXPLOSION HAZARD INFORMATION (cont.)

FIRE-FIGHTING PROCEDURES: When explosive is burning, EVACUATE AREA. Avoid breathing vapor.
FIRE & EXPLOSION HAZARDS: Dangerous when exposed to heat or flame. Can support combustion of other materials involved in a fire and is capable of undergoing detonation if heated to high temperatures especially under confinement including being piled on itself in a burning fire. When heated to decomposition, highly toxic fumes may be emitted. Do not return to area of explosion, until smoke and fumes have dissipated.

SECTION 8 - PERSONAL PROTECTION INFORMATION

EYE PROTECTION: Safety goggles approved for the handling of explosives materials.
SKIN PROTECTION: Neoprene, natural rubber, polyethylene or polyvinyl chloride gloves. Use barrier creams, hand protection and protective clothing.
RESPIRATORY PROTECTION: Not normally required. Mechanical filter or supplied air type respirator as required for concentrations exceeding the occupational exposure limit.
VENTILATION: Maintain adequate ventilation. Use local exhaust if needed.

SECTION 9 - PERSONAL HANDLING INSTRUCTIONS

HANDLING: Explosives should not be abandoned at any location for any reason. Do not handle during electrical storms.
STORAGE: Store in a cool, dry, well-ventilated area remote from operations. Storage area should be of non-combustible construction. Organic materials, flammable substances and finely divided metals should be stored separately. Flames, smoking and unauthorized personnel are prohibited where this product is used or stored. Protect against physical damage, static electricity and lightning.
WARNING: Use of this product by persons lacking adequate training, experience and supervision may result in death or serious injury. Obey all Federal, State, and local laws / regulations applicable to transportation, storage, handling, and use of explosives.
DISTANCE: Always stay away from area of explosion or disposal sites. Stay behind suitable barriers.

SECTION 10 - SPILL & LEAK PROCEDURES

PROCEDURES IF MATERIAL IS RELEASED OR SPILLED (IN ADDITION, SEE SECTION 8): Isolate area. Eliminate ALL sources of ignition. Avoid skin contact. Scrape up. Remove soiled clothing.
WASTE DISPOSAL - USE APPROPRIATE METHOD(S): Disposal of unexploded or deteriorated explosives material can be hazardous. Expert assistance is positively recommended in destroying explosives. Accidents can be prevented by thorough planning and handling in accordance with approved methods. Consult your supervisor for assistance. If improperly disposed of, material could explode and cause death or serious injury.

In all cases, follow facility emergency response procedures. Contact Facility Environmental Manager for assistance. Report any discharge of oil or hazardous substance that may enter surface waters to the National Response Center (800) 424 - 8802.

Observe all applicable local, state, and federal environmental spill and water quality regulations.

SECTION 11 - PHYSICAL DATA

BOILING POINT:	NA	BULK DENSITY:	1.27 g/cc
MELTING POINT:	NA	%VOLATILE BY VOLUME:	NA
VAPOR PRESSURE:	NA	EVAPORATION RATE (ETHER=1):	NA
SOLUBILITY IN WATER:	Negligible with short-term exposure	DECOMPOSITION POINT:	374°F
APPEARANCE/ ODOR:	Odorless; off white gel		

SECTION 12 – COMMENTS

This product is classified as a Blasting Agent and need not be stored in a high explosive magazine, except where required by local regulations, as long as it is completely separate from any high explosives. Storage should be in a well-constructed, well-ventilated, dry structure located to conform to local, state, and federal regulations. The area surrounding an explosive magazine must be kept clear of combustible materials for a distance of 50 feet. Magazine floors and containers must be properly cleaned. Normal operating conditions are assumed unless otherwise stated. If any given, information is not clear or does not apply to your situation, STOP, store the material suitably, and seek correct help from your supervisors or the institute of Makers of Explosives. Bureau of Alcohol, Tobacco, and Firearms regulations for explosive storage and handling should be consulted and complied with. Disposal sites must be clear of people at the time of disposal.

NOTICE: The data and recommendations presented herein are based upon data, which are considered accurate. However, SEC makes no guarantee or warranty, either expressed or implied, of the accuracy or completeness of these data and recommendations. For more detailed information on the hazards of this product, contact the Regulatory Compliance Department at the address below:

DetaCorp, PO Box 462, Columbus, Kansas 66724, (620) 597-2552.

Material Safety Data Sheet

Dyno Nobel Inc.
2650 Decker Lake Boulevard, Suite 300
Salt Lake City, Utah 84119
Phone: 801-364-4800 Fax: 801-321-6703
E-Mail: dnna.hse@am.dynonobel.com
FOR 24 HOUR EMERGENCY, CALL CHEMTREC (USA) 800-424-9300
CANUTEC (CANADA) 613-996-6666

MSDS # 1122
Date 05/13/05

Supercedes
MSDS # 1122 01/24/05

SECTION I - PRODUCT IDENTIFICATION

Trade Name(s):

- NONEL® MS
- NONEL® LP
- NONEL® SL
- NONEL® TD
- NONEL® MS CONNECTOR
- NONEL® TWINPLEX™
- NONEL® STARTER
- NONEL® EZ DET®
- NONEL® EZTL™
- NONEL® EZ DRIFTER ®
- OPTIMIZER® OPTISLIDE®
- OPTIMIZER® OPTISURFACE®
- OPTIMIZER® OPTI-TL®

Product Class: NONEL® Non-electric Delay Detonators

Product Appearance & Odor: Aluminum cylindrical shell with varying length and diameter of attached colored plastic tubing. The detonator may be enclosed in a plastic housing, and an assembly may contain two detonators. Odorless.

DOT Hazard Shipping Description: Detonators, non-electric 1.1B UN0029 II
-or- Detonator assemblies, non-electric 1.1B UN0360 II
-or- Detonator assemblies, non-electric 1.4B UN0361 II

NFPA Hazard Classification: Not Applicable (See Section IV - Special Fire Fighting Procedures)

SECTION II - HAZARDOUS INGREDIENTS

Ingredients	CAS#	Occupational Exposure Limits OSHA PEL-TWA	ACGIH TLV-TWA
Pentaerythritol Tetranitrate (PETN)	78-11-5	None[1]	None[2]
Lead Azide	13424-46-9	0.05 mg (Pb)/m^3	0.05 mg (Pb)/m^3
Lead	7439-92-1	0.05 mg (Pb)/m^3	0.05 mg (Pb)/m^3
Silicon	7440-21-3	15 mg / m^3 (total dust) 5 mg / m^3 (respirable fraction)	10 mg / m^3
Selenium	7782-49-2	0.2 mg/m^3	0.2 mg/m^3
Red Lead (Lead tetroxide)	1314-41-6	0.05 mg (Pb)/m^3	0.05 mg (Pb)/m^3
Titanium dioxide	13463-67-7	15 mg/m^3	10 mg/m^3
Barium Chromate	10294-40-3	1 mg (CrO_3)/10m^3 (ceiling) 0.5 mg (Ba)/m^3	0.01 mg (Cr)/m^3 0.5 mg (Ba)/m^3
Lead Chromate	7758-97-6	0.05 mg (Pb)/m^3 1 mg (CrO_3)/10m^3 (ceiling)	0.15 mg (Pb)/m^3 0.012 mg (Cr)/m^3
Barium Sulfate	7727-43-7	0.5 mg (Ba)/m^3	10 mg/m^3
Potassium Perchlorate[3]	7778-74-7	None[1]	None[2]
Silica (crystalline)	61790-53-2	See Note Below	0.05 mg/m^3 (resp frac)
Molybdenum	7439-98-7	None[1]	None[2]

Tungsten	7440-33-7	None[1]	5 mg/m^3 (TWA) 10 mg/m^3 (STEL)
Aluminum	7429-90-5	15 mg/m^3 (total dust) 5 mg/m^3 (respirable fraction)	5 mg/m^3
Antimony	7440-36-0	0.5 mg/m^3	0.5 mg/m^3
Cyclotetramethylene Tetranitramine (HMX)	2691-41-0	None[1]	None[2]

[1] Use limit for particulates not otherwise regulated (PNOR): Total dust, 15 mg/m^3 ; respirable fraction, 5 mg/m^3 .
[2] Use limit for particulates not otherwise classified (PNOC): Inhalable particulate, 10 mg/m^3 ; respirable part., 3 mg/m^3 .
Note: The OSHA PEL for crystalline silica is calculated as follows:
Quartz, respirable: 10 mg/m^3 [e] / % SiO_2 + 2 Quartz, total dust: 30 mg/m^3 / % SiO_2 + 2
[3] Not all delay periods contain perchlorate. Those that do contain between from about 4 to a maximum of about 60 mg perchlorate per detonator.

Ingredients, other than those mentioned above, as used in this product are not hazardous as defined under current Department of Labor regulations, or are present in deminimus concentrations (less than 0.1% for carcinogens, less than 1.0% for other hazardous materials).

SECTION III - PHYSICAL DATA

Boiling Point: Not Applicable
Vapor Density: Not Applicable
Percent Volatile by Volume: Not Applicable
Evaporation Rate (Butyl Acetate = 1): Not Applicable
Vapor Pressure: Not Applicable
Density: Not Applicable
Solubility in Water: Not Applicable

SECTION IV - FIRE AND EXPLOSION HAZARD DATA

Flash Point: Not Applicable **Flammable Limits:** Not Applicable
Extinguishing Media: (See Special Fire Fighting Procedures section.)
Special Fire Fighting Procedures: Do not attempt to fight fires involving explosive materials. Evacuate all personnel to a predetermined safe, distant location. Allow fire to burn unless it can be fought remotely or with fixed extinguishing systems (sprinklers).
Unusual Fire and Explosion Hazards: Can explode or detonate under fire conditions. Burning material may produce toxic vapors.

SECTION V - HEALTH HAZARD DATA

Effects of Overexposure

This is a packaged product that will not result in exposure to the explosive material under normal conditions of use. Exposure concerns are primarily with post-detonation reaction products, particularly heavy metal compounds.

Eyes: No exposure to chemical hazards anticipated with normal handling procedures. Particulates in the eye may cause irritation, redness, swelling, itching, pain and tearing.
Skin: No exposure to chemical hazards anticipated with normal handling procedures. Exposure to post-detonation reaction products may cause irritation.
Ingestion: No exposure to chemical hazards anticipated with normal handling procedures. Post-detonation reaction product residue is toxic by ingestion. Symptoms may include gastroenteritis with abdominal pain, nausea, vomiting and diarrhea. See systemic effects below.

Inhalation: Not a likely route of exposure. See systemic effects below.
Systemic or Other Effects: None anticipated with normal handling procedures. Repeated inhalation or ingestion of post-detonation reaction products may lead to systemic effects such as respiratory tract irritation, ringing of the ears, dizziness, elevated blood pressure, blurred vision and tremors. Heavy metal (lead) poisoning can occur.
Carcinogenicity: ACGIH classifies Lead as a "Suspected Human Carcinogen" and insoluble Chromium VI as "Confirmed Human Carcinogen". NTP, OSHA, and IARC consider components contained in this detonator carcinogenic.

Perchlorate: Perchlorate can potentially inhibit iodide uptake by the thyroid and result in a decrease in thyroid hormone. The National Academy of Sciences (NAS) has reviewed the toxicity of perchlorate and has concluded that even the most sensitive populations could ingest up to 0.7 microgram perchlorate per kilogram of body weight per day without adversely affecting health. The USEPA must establish a maximum contaminant level (MCL) for perchlorate in drinking water by 2007, and this study by NAS may result in a recommendation of about 20 ppb for the MCL.

Emergency and First Aid Procedures

Eyes: Irrigate with running water for at least fifteen minutes. If irritation persists, seek medical attention.
Skin: Wash with soap and water.
Ingestion: Seek medical attention.
Inhalation: Not applicable.
Special Considerations: None

SECTION VI - REACTIVITY DATA

Stability: Stable under normal conditions, may explode when subjected to fire, supersonic shock or high-energy projectile impact.
Conditions to Avoid: Keep away from heat, flame, ignition sources, impact, friction, electrostatic discharge and strong shock. Do not attempt to disassemble.
Materials to Avoid (Incompatibility): Corrosives (acids and bases or alkalis).
Hazardous Decomposition Products: Carbon Monoxide (CO), Nitrous Oxides (NO_X), Sulfides, Chromates, Lead (Pb), Antimony (Sb) and various oxides and complex oxides of metals.
Hazardous Polymerization: Will not occur.

SECTION VII - SPILL OR LEAK PROCEDURES

Steps to be taken in Case Material is Released or Spilled: Protect from all ignition sources. In case of fire evacuate all personnel to a safe distant area and allow to burn or fight fire remotely. Notify authorities in accordance with emergency response procedures. Only personnel trained in emergency response should respond. If no fire danger is present, and product is undamaged and/or uncontaminated, repackage product in original packaging or other clean DOT approved container. Ensure that a complete account of product has been made and is verified. If loose explosive powder is spilled, such as from a broken detonator, only properly qualified and authorized personnel should be involved with handling and clean-up activities. Spilled explosive powder is extremely sensitive to initiation and may detonate. Follow applicable Federal, State, and local spill reporting requirements.

Waste Disposal Method: Disposal must comply with Federal, State and local regulations. If product becomes a waste, it is potentially regulated as a hazardous waste as defined under the Resource Conservation and Recovery Act (RCRA) 40 CFR, part 261. Review disposal requirements with a person knowledgeable with applicable environmental law (RCRA) before disposing of any explosive material.

SECTION VIII - SPECIAL PROTECTION INFORMATION

Ventilation: None required for normal handling. Provide enhanced ventilation after use if in underground mines or other enclosed areas.

Respiratory Protection: None required for normal handling.

Protective Clothing: Cotton gloves are recommended.

Eye Protection: Safety glasses are recommended.

Other Precautions Required: None.

SECTION IX - SPECIAL PRECAUTIONS

Precautions to be taken in handling and storage: Store in cool, dry, well-ventilated location. Store in compliance with Federal, State, and local regulations. Only properly qualified and authorized personnel should handle and use explosives. Keep away from heat, flame, ignition sources, impact, friction, electrostatic discharge and strong shock.

Precautions to be taken during use: Use accepted safe industry practices when using explosive materials. Unintended detonation of explosives or explosive devices can cause serious injury or death. Avoid breathing the fumes or gases from detonation of explosives. Detonation in confined or unventilated areas may result in exposure to hazardous fumes or oxygen deficiency.

Other Precautions: It is recommended that users of explosive materials be familiar with the Institute of Makers of Explosives Safety Library Publications.

SECTION X - SPECIAL INFORMATION

These products contain the following substances that are subject to the reporting requirements of Section 313 of Title III of the Superfund Amendments and Reauthorization Act of 1986 and 40 CFR Part 372.

Chemical Name	CAS Number	Max. lbs/1000 units
Lead	7439-92-1	39.4
	(Use Toxic Chemical Category Code)	
Lead Compounds	N420	2.0
Barium Compounds	N040	1.8
Chromium Compounds	N090	1.9

Range* of Section 313 Chemicals in each product

Product	lb Pb per 1000 detonators	lb Pb compounds per 1000 detonators	lb Ba compounds per 1000 detonators	lb Cr compounds per 1000 detonators
NONEL® MS	0 - 27	0.3 – 1.5	0 – 0.9	0 – 0.9
NONEL® LP	0 - 30	0.3 – 2.0	0 - 1.8	0 - 1.9
NONEL® SL	7 - 27	0.3 – 1.5	0	0
NONEL® TD	0 - 18	0.3 – 0.7	0	0
NONEL® MS Connector	5 - 16	0.3 – 0.4	0	0
NONEL® TWINPLEX™	5 - 15	0.3 – 0.7	0	0
NONEL® STARTER	0	0.3	0	0
NONEL® EZ DET®	22 - 36	2.0	0	0
NONEL® EZTL™	5 - 15	0.5 – 0.7	0	0
NONEL® EZ DRIFTER	39.4	1.3	1.2	1.3
NONEL® OPTISLIDE®	0	0	0	0
NONEL® OPTISURFACE®	0	0	0	0
NONEL® OPTI-TL®	0	0	0	0

*** The exact quantity and weight percent of Section 313 Chemicals in each delay period and tubing length for each product is available upon request.**

Disclaimer

Dyno Nobel Inc. and its subsidiaries disclaim any warranties with respect to this product, the safety or suitability thereof, the information contained herein, or the results to be obtained, whether express or implied, INCLUDING WITHOUT LIMITATION, ANY IMPLIED WARRANTY OF MERCHANTABILITY OR FITNESS FOR A PARTICULAR PURPOSE AND/OR OTHER WARRANTY. The information contained herein is provided for reference purposes only and is intended only for persons having relevant technical skills. Because conditions and manner of use are outside of our control, the user is responsible for determining the conditions of safe use of the product. Buyers and users assume all risk, responsibility and liability whatsoever from any and all injuries (including death), losses, or damages to persons or property arising from the use of this product or information. Under no circumstances shall either Dyno Nobel Inc. or any of its subsidiaries be liable for special, consequential or incidental damages or for anticipated loss of profits.

ORICA

Material Safety Data Sheet

Orica Canada Inc.
Maple Street
Brownsburg, PQ
For MSDS Requests: 450-533-4201

Orica USA Inc.
33101 E. Quincy Avenue
Watkins, CO 80137
For MSDS Requests: 303-268-5000

EMERGENCY CONTACTS
FOR CHEMICAL EMERGENCIES (24 HOUR) INVOLVING TRANSPORTATION, SPILL, LEAK, RELEASE, FIRE ORACCIDENTS: IN CANADA CALL THE ORICA CANADA TRANSPORTATION EMERGENCY RESPONSE SYSTEM AT **1-877-561-3636, or CHEMTREC AT 1-800-424-9300**

SECTION 1 - CHEMICAL PRODUCT AND COMPANY IDENTIFICATION

Product Name: **Non-Electric Detonator Assemblies (Exel Handidet D - Exel MS D - Exel XT D)**

MATS Index: 58594
Date Issued: 01-22-04

MSDS Number: 20080
Product Use: Explosives.
Alternate Name(s):
TYPE A: Anodet MS, Bunch Connector, Connectadet, Exel Constadet, Exel Handidet, Exel Handidet LP, Exel Handidet XT, Exel HTD XT, Exel LP, Exel MS, Exel MS Connectors, Exel RTD Detonators, Exel SHD, Exel T&D, Exel XT, NLLD, Exel Noiseless Leadin Line Detonators, Uniconnector, X-331 MS Connector, X-332, X-333 LP, X-334 Lead-in Line, X-335 SD, X-375 XT, X- 387 Exel. **TYPE B:** Exel Constadet, Exel Handidet, Exel Handidet LP, Exel Handidet XT, Exel HTD XT, Exel LP, Exel MS, Exel MS Connectors, Exel T&D, Exel XT, X-375 XT **TYPE C:** Exel HTD, Exel HTD XT, Exel Noiseless Lead-in Line.

SECTION 2 - COMPOSITION / INFORMATION ON INGREDIENTS

HAZARDOUS INGREDIENT (S)	% (w/w)	ACGIH TWA	CAS NO.
A signal line (solid core and/or shock tube) containing an explosive charge of PETN or HMX/AL blend and a detonator containing:			
Pentaerythritol Tetranitrate (PETN)			(78-11-5)
Lead Azide			(13424-46-9)

May contain a lead sheathed delay element(s); may include a delay composition.

SECTION 3 - HAZARD IDENTIFICATION

Emergency Overview: Risk of explosion by shock, friction, fire or other sources of ignition. Read the entire MSDS for more thorough evaluation of the hazards.

SECTION 4 - FIRST AID MEASURES

General: Not applicable; this is a packaged product that will not result in exposure to the contents under normal conditions of use. In the event of contact, administer first aid appropriate for burns, lacerations and bruises.

SECTION 5 - FIRE-FIGHTING MEASURES

Flash Point: Not applicable.
Flammable Limits (Lower): Not applicable.
Flammable Limits (Upper): Not applicable.
Auto Ignition Temperature: PETN explodes at 190-210°C (374 to 410°F)
Decomposition Temperature: PETN melts at 140°C (284°F). Prolonged heating of detonators may cause an explosion at a lower temperature.
Rate of Burning: Product will burn and detonate.
Explosive Power: Not available.
Sensitivity to Mechanical Impact: Sensitive to mechanical impact.
Sensitivity to Static Discharge: Relatively insensitive to electrostatic discharge.
Hazardous Reactions: None known.
Fire and Explosion Hazards: This product is a high explosive with a mass detonation hazard.

Extinguishing Media: See below.
Fire Fighting Procedures: DO NOT FIGHT FIRES INVOLVING EXPLOSIVE MATERIALS. Immediately evacuate all personnel from the area to a safe distance. Guard against reentry.
Fire Fighting Protective Equipment: Not applicable.
NOTE: Also see "Section 10 - Stability and Reactivity".

SECTION 6 - ACCIDENTAL RELEASE MEASURES

Spills, Leaks, or Releases: Pick up by hand. Use normal precautions taken for handling explosives.
Deactivating Chemicals: Not required. If detonators are broken, contact the product advisor.

SECTION 7 - HANDLING AND STORAGE

Handling: This product is an explosive and should only be used under the supervision of trained personnel. Avoid rough handling. Keep upwind from discharging unit.
Storage Requirements: Store under moderate temperatures recommended by a technical service representative. Store under dry conditions in a well ventilated magazine that has been approved for detonator storage. DO NOT store explosives in a detonator magazine or detonators in an explosive magazine. Keep away from heat, sparks and flames. Keep containers closed. Initiating explosives should be kept well away from explosives; protected from physical damage; separated from oxidizing materials, combustibles, and sources of heat. Keep away from incompatibles. Meet all regulatory requirements for shipping and magazining.
Storage Temperature: It is recommended that detonators not be exposed to temperatures greater than 70°C (158°F). Without approved procedures to address the elevated temperatures.

SECTION 8 - EXPOSURE CONTROLS / PERSONAL PROTECTION

PREVENTIVE MEASURES:
Recommendations listed in this section indicate the type of equipment which will provide protection against overexposure to this product. Conditions of use, adequacy of engineering or other control measures, and actual exposures will dictate the need for specific protective devices at your workplace.
Engineering Controls: Full handling precautions should be taken at all times.
PERSONAL PROTECTIVE EQUIPMENT:
Eye Protection: Use safety glasses as good general practice.
Skin Protection: Not required.
Respiratory Protection: Not required.
EXPOSURE GUIDELINES:
PRODUCT:
None established for product.
HAZARDOUS INGREDIENT(S):
Nitrogen Dioxide:
ACGIH TLV 3 ppm
OSHA STEL 1 ppm
Carbon Monoxide:
ACGIH TLV 25 ppm
OSHA STEL 35 ppm
Sulphur Dioxide:
ACGIH TLV 2 ppm
Lead:
ACGIH TLV 0.05 mg/m3
OSHA STEL 0.05 mg/m3
Internal Guideline 0.05 mg/m3

SECTION 9 - PHYSICAL AND CHEMICAL PROPERTIES

Chemical Name: Not applicable.
Chemical Family: Explosive.
Molecular Formula: Not applicable.
Appearance: Ingredients housed in an aluminum or copper shell.
Odour: Odourless.

pH: Not applicable.
Vapour Pressure (mm Hg at 20°C/68°F): Not applicable.
Vapour Density (Air=1): Not applicable.
Boiling Point: Not applicable.
Melting Point: PETN melts at 140oC (284oF)
Solubility (Water): (Negligible)
Solubility (Other): Not applicable.
Specific Gravity: Not applicable.
Evaporation Rate: Not applicable.

SECTION 10 - STABILITY AND REACTIVITY

Hazardous Decomposition Products: Thermal decomposition products are toxic and may include hydrocarbons, oxides of carbon, sulphur, lead and nitrogen.
Chemical Stability: Unstable. Can explode on impact.
Conditions to Avoid: Keep away from heat, sparks and flame. Keep away from heat, impact and friction.
Incompatibility with other Substances: Strong oxidizing agents.
Hazardous Polymerization: Will not occur.

SECTION 11 - TOXICOLOGICAL INFORMATION

TOXICOLOGICAL DATA:
PRODUCT:
None established for product.
INGREDIENTS:
None established for hazardous ingredients.
POTENTIAL HEALTH EFFECTS:
Inhalation: Detonation decomposition products may be toxic.
Skin Contact: No evidence of irritant effects from normal handling and use.
Eye Contact: No evidence of irritant effects from normal handling and use.
Ingestion: Highly unlikely under normal industrial use.
Sub chronic Effects: None known.
Chronic Effects: None known.
Carcinogenicity: The ingredients of this product are not classified as carcinogenic by ACGIH (American Conference of Governmental Industrial Hygienists) or IARC (International Agency for Research on Cancer), not regulated as carcinogens by OSHA (Occupational Safety and Health Administration), and not listed as carcinogens by NTP (National Toxicology Program).
Mutagenicity: There is no evidence of mutagenic potential.
Reproductive Effects: No information is available and no adverse reproductive effects are anticipated.
Teratogenicity and Fetotoxicity: No information is available and no adverse teratogenic/embryotoxic effects are anticipated.
Synergistic Materials: None known.

SECTION 12 - ECOLOGICAL INFORMATION

Ecotoxicological Information: None known.
Environmental Effects: By considering the production and use of the substance, it is unlikely that significant environmental exposure will arise.

SECTION 13 - DISPOSAL CONSIDERATIONS

Burn under supervision of an expert at an explosive burning ground or destroy, by detonation in bore holes, in accordance with applicable local, state, provincial and federal regulations. Call upon the services of an Orica Technical Representative.

SECTION 14 - TRANSPORT INFORMATION

TDG Name: Detonator assemblies, non-electric.
Proper Shipping Name: Detonator assemblies, non-electric.
Class/Division: Type A: 1.1B. **Type B:** 1.4B. **Type C** - 1.4S. (**"Type"** explained in Alternate Name, Section 1)
Product Identification Number (PIN): Type A: UN0360 **Type B:** UN0361 **Type C**: UN0500 (**"Type"** explained in Alternate Name, Section 1)

Packing Group: II
Transportation Emergency Telephone Number: Canada: 1-877-561-3636. U.S.: 1-800-424-9300.
DOT Class: 1.1 - Explosive.

SECTION 15 - REGULATORY INFORMATION

CANADIAN CLASSIFICATION:
This product has been classified in accordance with the hazard criteria of the CPR (Controlled Products Regulations) and this MSDS (Material Safety Data Sheet) contains all the information required by the CPR.
Controlled Products Regulations (WHMIS) Classification: This product is an explosive and is not regulated by WHMIS.
CEPA / Canadian Domestic Substances List (DSL): The substance(s) in this product is/are on the Canadian Domestic Substances List (CEPA DSL).
IARC Classification: None of the components of this product are listed on IARC.
USA CLASSIFICATION:
Physical: Explosive.
Health: Not regulated.
Target Organ: None identified.
SARA Regulations Sections 313 and 40 CFR 372: This product does not contain any chemicals subject to reporting requirements.
Ozone Protection and 40 CFR 42: This product does not contain nor is it manufactured with ozone depleting substances.
Other Regulations/Legislation which apply to this product: None known.

SECTION 16 - OTHER INFORMATION

MATS Index: 58594
REFERENCES:
RTECS-Registry of Toxic Effects of Chemical Substances, CCINFOdisc, Canadian Centre for Occupational Health and Safety, National Institute of Occupational Safety and Health, U.S. Dept. of Health & Human Services, Cincinnati, 1998.

Supplier's Material Safety Data Sheets.

Material Safety Data Sheet

Dyno Nobel Inc.
2650 Decker Lake Boulevard, Suite 300
Salt Lake City, Utah 84119
Phone: 801-364-4800 Fax: 801-321-6703
E-Mail: dnna.hse@am.dynonobel.com
FOR 24 HOUR EMERGENCY, CALL CHEMTREC (USA) 800-424-9300
CANUTEC (CANADA) 613-996-6666

MSDS # 1122
Date 05/13/05

Supercedes
MSDS # 1122 01/24/05

SECTION I - PRODUCT IDENTIFICATION

Trade Name(s):

- NONEL® MS
- NONEL® LP
- NONEL® SL
- NONEL® TD
- NONEL® MS CONNECTOR
- NONEL® TWINPLEX™
- NONEL® STARTER
- NONEL® EZ DET®
- NONEL® EZTL™
- NONEL® EZ DRIFTER ®
- OPTIMIZER® OPTISLIDE®
- OPTIMIZER® OPTISURFACE®
- OPTIMIZER® OPTI-TL®

Product Class: NONEL® Non-electric Delay Detonators

Product Appearance & Odor: Aluminum cylindrical shell with varying length and diameter of attached colored plastic tubing. The detonator may be enclosed in a plastic housing, and an assembly may contain two detonators. Odorless.

DOT Hazard Shipping Description: Detonators, non-electric 1.1B UN0029 II
-or- Detonator assemblies, non-electric 1.1B UN0360 II
-or- Detonator assemblies, non-electric 1.4B UN0361 II

NFPA Hazard Classification: Not Applicable (See Section IV - Special Fire Fighting Procedures)

SECTION II - HAZARDOUS INGREDIENTS

Ingredients	CAS#	Occupational Exposure Limits OSHA PEL-TWA	ACGIH TLV-TWA
Pentaerythritol Tetranitrate (PETN)	78-11-5	None[1]	None[2]
Lead Azide	13424-46-9	0.05 mg (Pb)/m^3	0.05 mg (Pb)/m^3
Lead	7439-92-1	0.05 mg (Pb)/m^3	0.05 mg (Pb)/m^3
Silicon	7440-21-3	15 mg / m^3 (total dust) 5 mg / m^3 (respirable fraction)	10 mg / m^3
Selenium	7782-49-2	0.2 mg/m^3	0.2 mg/m^3
Red Lead (Lead tetroxide)	1314-41-6	0.05 mg (Pb)/m^3	0.05 mg (Pb)/m^3
Titanium dioxide	13463-67-7	15 mg/m^3	10 mg/m^3
Barium Chromate	10294-40-3	1 mg (CrO_3)/10m^3 (ceiling) 0.5 mg (Ba)/m^3	0.01 mg (Cr)/m^3 0.5 mg (Ba)/m^3
Lead Chromate	7758-97-6	0.05 mg (Pb)/m^3 1 mg (CrO_3)/10m^3 (ceiling)	0.15 mg (Pb)/m^3 0.012 mg (Cr)/m^3
Barium Sulfate	7727-43-7	0.5 mg (Ba)/m^3	10 mg/m^3
Potassium Perchlorate[3]	7778-74-7	None[1]	None[2]
Silica (crystalline)	61790-53-2	See Note Below	0.05 mg/m^3 (resp frac)
Molybdenum	7439-98-7	None[1]	None[2]

Tungsten	7440-33-7	None[1]	5 mg/m^3 (TWA) 10 mg/m^3 (STEL)
Aluminum	7429-90-5	15 mg/m^3 (total dust) 5 mg/m^3 (respirable fraction)	5 mg/m^3
Antimony	7440-36-0	0.5 mg/m^3	0.5 mg/m^3
Cyclotetramethylene Tetranitramine (HMX)	2691-41-0	None[1]	None[2]

[1] Use limit for particulates not otherwise regulated (PNOR): Total dust, 15 mg/m^3 ; respirable fraction, 5 mg/m^3 .
[2] Use limit for particulates not otherwise classified (PNOC): Inhalable particulate, 10 mg/m^3 ; respirable part., 3 mg/m^3 .
Note: The OSHA PEL for crystalline silica is calculated as follows:
Quartz, respirable: 10 mg/m$^{3\,e}$ / % SiO_2 + 2 Quartz, total dust: 30 mg/m^3 / % SiO_2 + 2
[3] Not all delay periods contain perchlorate. Those that do contain between from about 4 to a maximum of about 60 mg perchlorate per detonator.

Ingredients, other than those mentioned above, as used in this product are not hazardous as defined under current Department of Labor regulations, or are present in deminimus concentrations (less than 0.1% for carcinogens, less than 1.0% for other hazardous materials).

SECTION III - PHYSICAL DATA

Boiling Point: Not Applicable
Vapor Density: Not Applicable
Percent Volatile by Volume: Not Applicable
Evaporation Rate (Butyl Acetate = 1): Not Applicable
Vapor Pressure: Not Applicable
Density: Not Applicable
Solubility in Water: Not Applicable

SECTION IV - FIRE AND EXPLOSION HAZARD DATA

Flash Point: Not Applicable **Flammable Limits:** Not Applicable
Extinguishing Media: (See Special Fire Fighting Procedures section.)
Special Fire Fighting Procedures: Do not attempt to fight fires involving explosive materials. Evacuate all personnel to a predetermined safe, distant location. Allow fire to burn unless it can be fought remotely or with fixed extinguishing systems (sprinklers).
Unusual Fire and Explosion Hazards: Can explode or detonate under fire conditions. Burning material may produce toxic vapors.

SECTION V - HEALTH HAZARD DATA

Effects of Overexposure

This is a packaged product that will not result in exposure to the explosive material under normal conditions of use. *Exposure concerns are primarily with post-detonation reaction products, particularly heavy metal compounds.*

Eyes: No exposure to chemical hazards anticipated with normal handling procedures. Particulates in the eye may cause irritation, redness, swelling, itching, pain and tearing.
Skin: No exposure to chemical hazards anticipated with normal handling procedures. Exposure to post-detonation reaction products may cause irritation.
Ingestion: No exposure to chemical hazards anticipated with normal handling procedures. Post-detonation reaction product residue is toxic by ingestion. Symptoms may include gastroenteritis with abdominal pain, nausea, vomiting and diarrhea. See systemic effects below.

Inhalation: Not a likely route of exposure. See systemic effects below.
Systemic or Other Effects: None anticipated with normal handling procedures. Repeated inhalation or ingestion of post-detonation reaction products may lead to systemic effects such as respiratory tract irritation, ringing of the ears, dizziness, elevated blood pressure, blurred vision and tremors. Heavy metal (lead) poisoning can occur.
Carcinogenicity: ACGIH classifies Lead as a "Suspected Human Carcinogen" and insoluble Chromium VI as "Confirmed Human Carcinogen". NTP, OSHA, and IARC consider components contained in this detonator carcinogenic.

Perchlorate: Perchlorate can potentially inhibit iodide uptake by the thyroid and result in a decrease in thyroid hormone. The National Academy of Sciences (NAS) has reviewed the toxicity of perchlorate and has concluded that even the most sensitive populations could ingest up to 0.7 microgram perchlorate per kilogram of body weight per day without adversely affecting health. The USEPA must establish a maximum contaminant level (MCL) for perchlorate in drinking water by 2007, and this study by NAS may result in a recommendation of about 20 ppb for the MCL.

Emergency and First Aid Procedures

Eyes: Irrigate with running water for at least fifteen minutes. If irritation persists, seek medical attention.
Skin: Wash with soap and water.
Ingestion: Seek medical attention.
Inhalation: Not applicable.
Special Considerations: None

SECTION VI - REACTIVITY DATA

Stability: Stable under normal conditions, may explode when subjected to fire, supersonic shock or high-energy projectile impact.
Conditions to Avoid: Keep away from heat, flame, ignition sources, impact, friction, electrostatic discharge and strong shock. Do not attempt to disassemble.
Materials to Avoid (Incompatibility): Corrosives (acids and bases or alkalis).
Hazardous Decomposition Products: Carbon Monoxide (CO), Nitrous Oxides (NO_X), Sulfides, Chromates, Lead (Pb), Antimony (Sb) and various oxides and complex oxides of metals.
Hazardous Polymerization: Will not occur.

SECTION VII - SPILL OR LEAK PROCEDURES

Steps to be taken in Case Material is Released or Spilled: Protect from all ignition sources. In case of fire evacuate all personnel to a safe distant area and allow to burn or fight fire remotely. Notify authorities in accordance with emergency response procedures. Only personnel trained in emergency response should respond. If no fire danger is present, and product is undamaged and/or uncontaminated, repackage product in original packaging or other clean DOT approved container. Ensure that a complete account of product has been made and is verified. If loose explosive powder is spilled, such as from a broken detonator, only properly qualified and authorized personnel should be involved with handling and clean-up activities. Spilled explosive powder is extremely sensitive to initiation and may detonate. Follow applicable Federal, State, and local spill reporting requirements.

Waste Disposal Method: Disposal must comply with Federal, State and local regulations. If product becomes a waste, it is potentially regulated as a hazardous waste as defined under the Resource Conservation and Recovery Act (RCRA) 40 CFR, part 261. Review disposal requirements with a person knowledgeable with applicable environmental law (RCRA) before disposing of any explosive material.

SECTION VIII - SPECIAL PROTECTION INFORMATION

Ventilation: None required for normal handling. Provide enhanced ventilation after use if in underground mines or other enclosed areas.

Respiratory Protection: None required for normal handling.

Protective Clothing: Cotton gloves are recommended.

Eye Protection: Safety glasses are recommended.

Other Precautions Required: None.

SECTION IX - SPECIAL PRECAUTIONS

Precautions to be taken in handling and storage: Store in cool, dry, well-ventilated location. Store in compliance with Federal, State, and local regulations. Only properly qualified and authorized personnel should handle and use explosives. Keep away from heat, flame, ignition sources, impact, friction, electrostatic discharge and strong shock.

Precautions to be taken during use: Use accepted safe industry practices when using explosive materials. Unintended detonation of explosives or explosive devices can cause serious injury or death. Avoid breathing the fumes or gases from detonation of explosives. Detonation in confined or unventilated areas may result in exposure to hazardous fumes or oxygen deficiency.

Other Precautions: It is recommended that users of explosive materials be familiar with the Institute of Makers of Explosives Safety Library Publications.

SECTION X - SPECIAL INFORMATION

These products contain the following substances that are subject to the reporting requirements of Section 313 of Title III of the Superfund Amendments and Reauthorization Act of 1986 and 40 CFR Part 372.

Chemical Name	CAS Number	Max. lbs/1000 units
Lead	7439-92-1	39.4
	(Use Toxic Chemical Category Code)	
Lead Compounds	N420	2.0
Barium Compounds	N040	1.8
Chromium Compounds	N090	1.9

Range* of Section 313 Chemicals in each product

Product	lb Pb per 1000 detonators	lb Pb compounds per 1000 detonators	lb Ba compounds per 1000 detonators	lb Cr compounds per 1000 detonators
NONEL® MS	0 - 27	0.3 – 1.5	0 – 0.9	0 – 0.9
NONEL® LP	0 - 30	0.3 – 2.0	0 - 1.8	0 - 1.9
NONEL® SL	7 - 27	0.3 – 1.5	0	0
NONEL® TD	0 - 18	0.3 – 0.7	0	0
NONEL® MS Connector	5 - 16	0.3 – 0.4	0	0
NONEL® TWINPLEX™	5 - 15	0.3 – 0.7	0	0
NONEL® STARTER	0	0.3	0	0
NONEL® EZ DET®	22 - 36	2.0	0	0
NONEL® EZTL™	5 - 15	0.5 – 0.7	0	0
NONEL® EZ DRIFTER	39.4	1.3	1.2	1.3
NONEL® OPTISLIDE®	0	0	0	0
NONEL® OPTISURFACE®	0	0	0	0
NONEL® OPTI-TL®	0	0	0	0

* The exact quantity and weight percent of Section 313 Chemicals in each delay period and tubing length for each product is available upon request.

Disclaimer

Material Safety Data Sheet

Preparation Date: 19-Jul-2007 **Revision Date:** 10-Oct-2007 **Revision Number:** 1

SECTION 1 - PRODUCT AND COMPANY IDENTIFICATION

Supplier(s):

Orica Canada Inc.
Maple Street
Brownsburg, QC
For MSDS Requests: 450-533-4201

Orica USA Inc.
33101 E. Quincy Avenue
Watkins, CO 80137-9406
For MSDS Requests: 1-303-268-5000

Product Name:	**Exel Connectadet (Detonator Assemblies Non Electric)**
Product Code:	20063
Alternate Name(s):	Not available
UN-No:	UN0500
Recommended Use:	Non-Electric detonators and accessory products.

Emergency Telephone Number: FOR CHEMICAL EMERGENCIES (24 HOUR) INVOLVING TRANSPORTATION, SPILL, LEAK, RELEASE, FIRE OR ACCIDENTS: IN CANADA AND US CALL THE ORICA TRANSPORTATION EMERGENCY RESPONSE SYSTEM AT **1-877-561-3636**. IN THE U.S. FOR LOST, STOLEN OR MISPLACED EXPLOSIVES CALL: BATF **1-800-800-3855**. FORM ATF F 5400.0 MUST BE COMPLETED AND LOCAL AUTHORITIES (STATE/MUNICIPAL POLICE, ETC.) MUST BE ADVISED.

SECTION 2 - HAZARD IDENTIFICATION

Emergency Overview:

The following information is the potential hazards associated with the ingredient(s) in this product. It is our belief that, under conditions of normal occupational exposure, this product should pose no such hazards to the user. Main risk is that of explosion by shock, friction, fire or other sources of ignition. Read the entire MSDS for a more thorough evaluation of the hazards.

Appearance:	**Physical State:**	**Odor:**
A signal line (solid core/ shock/tube) containing an explosive charge and a detonator.	Solid	Odorless

SECTION 3 - COMPOSITION/ INFORMATION ON INGREDIENTS

Chemical Name	**CAS-No**	**Weight %**
Pentaerythritol Tetranitrate (PETN)	78-11-5	0 - 10
Lead Azide	13424-46-9	0 - 5
Cyclotetramethylenetetranitramine (HMX)	2691-41-0	0.2-0.4
Aluminum	7429-90-5	<0.1

Also-may contain a lead sheathed delay element(s); may include a delay composition.

SECTION 4 - FIRST AID MEASURES

General advice:

General: Not applicable; this is a packaged product that will not result in exposure to the contents under normal conditions of use.
In the event of contact, administer first aid appropriate for burns, lacerations and bruises. If detonation fumes are inhaled, remove to fresh air. Give artificial respiration ONLY if breathing has stopped. Give cardiopulmonary resuscitation (CPR) if there is no breathing AND no pulse. Oxygen administration may be beneficial in this situation, but should only be administered by personnel trained in its use. Obtain medical attention IMMEDIATELY.

Eye contact: No applicable information.
Skin contact: No applicable information.

SECTION 4 - FIRST AID MEASURES

Inhalation: In the event those workers are overexposed to fumes and vapors resulting from detonation, remove victim from exposure and provide artificial respiration if not breathing.

Ingestion: No applicable information.

Notes to physician: No applicable information.

SECTION 5 - FIRE-FIGHTING MEASURES

Flammable properties: High explosive with mass detonation hazard. Expected to be sensitive to mechanical impact. Not expected to be sensitive to static discharge.

Suitable extinguishing media: DO NOT FIGHT FIRES INVOLVING EXPLOSIVES. Evacuate surrounding areas. When controlling fire before involvement of explosives, fire-fighters should wear positive pressure self-contained breathing apparatus (SCBA) and full turnout gear. Water may be applied through fixed extinguishing system (sprinklers) as long as people need not be present for the system to operate. Water may be used on small fires.

Unsuitable extinguishing media: DO NOT FIGHT FIRES INVOLVING EXPLOSIVES.

Protective equipment and precautions for firefighters: DO NOT FIGHT FIRES INVOLVING EXPLOSIVE MATERIALS. Immediately evacuate all personnel from the area to a safe distance. Guard against re-entry. This product is a high explosive with a mass detonation hazard. Thermal decomposition can lead to release of irritating gases and vapors.
As in any fire, wear self-contained breathing apparatus pressure-demand, NIOSH approved (or equivalent) and full protective gear

SECTION 6 - ACCIDENTAL RELEASE MEASURES

Methods for containment: No information available.

Methods for cleaning up: Not required. If detonators are damaged, contact an Orica Canada Inc. or Orica USA Inc. technical representative. Deactivating Chemicals: Not required. If detonators are broken, contact product advisor.

SECTION 7 - HANDLING AND STORAGE

Handling: This product is an explosive and should only be used under the supervision of trained personnel. Protect containers from physical damage. Keep away from incompatible materials, heat, sparks, flames and other ignition sources. Avoid rough handling.

Storage: Store under moderate temperatures recommended by a technical services representative. Store under dry conditions in a well ventilated magazine that has been approved for either detonator storage or explosive storage. Do NOT store explosives in a detonator magazine or detonators in an explosive magazine. Keep away from heat, sparks and flames. Keep containers closed. Explosives should be kept well away from initiating explosives; protected from physical damage; separated from oxidizing materials, combustibles, and sources of heat. Keep away from incompatibles. Meet all legal requirements for shipping and magazining. **Storage Temperature:** It is recommended that detonators not be stored or used at temperatures exceeding 70 °C (158 °F) without approved procedures to address the elevated temperatures.

SECTION 8 - EXPOSURE CONTROLS / PERSONAL PROTECTION

Chemical Name	ACGIH TLV	OSHA PEL	NIOSH IDLH
Nitrogen Dioxide	3 ppm	1 ppm	
Carbon Monoxide	25 ppm	35 ppm	
Sulphur Dioxide	2 ppm		
Lead Azide	0.05 mg/ m3	0.05 mg/ m3	

Other exposure guidelines: Recommendations listed in this section indicate the type of equipment that will provide protection against exposure to this product under normal conditions of use. Conditions of use, adequacy of engineering or other control measures, and actual exposure situations will dictate the need for specific protective devices at your workplace.

Engineering Measures: Full-handling precautions should be taken at all times.

Personal Protective Equipment

Eye/face protection: Safety glasses with side-shields are recommended to prevent eye contact.

Skin protection: Gloves and protective clothing made from cotton should provide adequate protective.

Hygiene Measures: Handle in accordance with good industrial hygiene and safety practice

SECTION 9 - PHYSICAL AND CHEMICAL PROPERTIES

Appearance:	A signal line (solid core/ shock/tube) containing an explosive charge and a detonator.	**Odor:**	Odorless
Physical State:	Solid	**Viscosity**	No information available
pH:	No data available	**Melting Point/Range:**	PETN melts at 140 °C / 284 °F
Flammable Limits (Upper):	No data available	**Flammable Limits (Lower):**	No data available
Explosion Power:	No data available	**Specific Gravity:**	Not available
Vapor Pressure:	Not available	**Oxidizing Properties:**	No information available
Partition Coefficient (n-octanol/water):	No data available		

SECTION 10 - STABILITY AND REACTIVITY

Stability: Unstable. Can explode from impact, heat or friction. If detonators are broken, contact product advisor. PETN explodes at 190 - 210 °C (374 - 410 °F).

Conditions to avoid: Impact or shock. Static discharge.

Incompatible materials: Acids, Bases.

Hazardous decomposition products: Thermal decomposition products are toxic and may include lead, hydrocarbons, oxides of carbon and nitrogen. To a lesser degree, decomposition products may include oxides of lead, chromium, barium, boron and hydrogen cyanide.

SECTION 11 - TOXICOLOGICAL INFORMATION

Acute Toxicity

Chemical Name	LD50 Oral	LD50 Dermal	LC50 Inhalation
Pentaerythritol Tetranitrate	1660 mg/kg Rat		
Lead Azide	790 mg/kg Rat		

Subchronic Toxicity (28 days): Organic nitrates act as vasodilators; signs and symptoms of poisoning include headache, dizziness, increased heart rate, postural weakness and hypotension. Dermatitis or "drug rash" of the skin may also be observed.

Chronic toxicity: Contains no substance that is a known carcinogen.

Carcinogenicity: The ingredients of this product are not classified as carcinogenic by ACGIH (American Conference of Governmental Industrial Hygienists) or IARC (International Agency for Research on Cancer), not regulated as carcinogens by OSHA (occupational Safety and health Administration), and not listed as carcinogens by NTP (National Toxicology Program).

Reproductive effects: It is our belief that under normal conditions of use, this product should pose no reproductive hazard to the worker. Lead exposure may cause reproductive effects based on studies in laboratory animals and on human epidemiological studies.

Developmental effects: It is our belief that under normal conditions of use, this product should pose no reproductive hazard to the worker. Lead has been shown to cause congenital abnormalities and behavioural deficits in experimental animals in addition to its ability to increase the number of miscarriages, stillbirths and abortions in lead-exposed women.

Target Organ: Eyes, Skin, cardiovascular system, Immune system.

Other adverse effects Prolonged or repeated exposure to organic nitrates may develop a tolerance due to chronic dilation of the blood vessels. This tolerance disappears rapidly after a few days away from exposure and withdrawal symptoms consisting of angina and heart attack have been reported in chronically exposed workers. Another type of tolerance loss is the "Monday morning disease", where workers experience headaches, dizziness, postural weakness and other symptoms.

SECTION 12 - ECOLOGICAL INFORMATION

Ecotoxicity effects: Contains no substances known to be hazardous to the environment or not degradable in wastewater treatment plants.

SECTION 13 - DISPOSAL CONSIDERATIONS

Waste Disposal Method: Burn under supervision of an expert at a government-approved explosive burning ground or destroy, by detonation in boreholes, in accordance with applicable local, provincial and federal laws. Call upon the services of an Orica Canada Inc. or Orica USA Inc. technical representative.

Chemical Name	RCRA	RCRA - Basis for Listing	RCRA - D Series Wastes	RCRA - U Series Wastes
Pentaerythritol Tetranitrate	(hazardous constituent - no waste number)			

SECTION 14 - TRANSPORT INFORMATION

DOT Proper Shipping Name: Detonator assemblies, Non-Electric
Hazard Class: 1.4B or 1.4S (depending on packaging)
UN-No: UN0500
Packing group: II
TDG Proper Shipping Name: Detonator assemblies, Non-Electric
Hazard Class/Division: 1.4B or 1.4S (depending on packaging)
UN-No: UN0500
Packing group: II

Transportation Emergency Telephone Number: 1-877-561-3636

SECTION 15 - REGULATORY INFORMATION

CANADIAN CLASSIFICATION: This product has been classified in accordance with the hazard criteria of the CPR (Controlled Products Regulations) and this MSDS contains all the information required by the CPR

WHMIS hazard class: This product is an explosive and is not regulated by WHMIS.

USA CLASSIFICATION:

SARA Regulations Sections 313 and 40 CFR 372: This product contains the following toxic chemical(s) subject to reporting requirements,

SARA 311/312 Hazardous Categorization

Acute Health Hazard:	No
Chronic Health Hazard:	No
Fire Hazard:	No
Reactive Hazard:	Yes
Sudden Release of Pressure Hazard:	No

Ozone Protection and 40 CFR 42: No reportable quantities of ozone depleting agents

Other Regulations/Legislations which apply to this product: Massachusetts Right-to-Know, Pennsylvania Right-to-Know, New Jersey Right-to-Know, Rhode Island Right-to-Know.

SECTION 15 - REGULATORY INFORMATION

TSCA: Complies **DSL:** Complies **NDSL:** Complies

The components in the product are on the following International Inventory lists:

Chemical Name	TSCA:	DSI:	NDSI:	ENCS	EINECS	ELINCS	CHINA	KECI	PICCS	AICS
Pentaerythritol tetranitrate	X	X		X	X			X		X
Lead Azide	X	X		X	X			X		X

Legend: X - Listed

SECTION 16 - OTHER INFORMATION

Prepared By: Safety, Health & Environment
303-268-5000

Preparation Date: 07-Nov-2005
Revision Date: 10-Oct-2007

The information contained herein is offered as a guide to the handling of this specific material and has been prepared in good faith by technically knowledgeable personnel. It is not intended to be all-inclusive and the manner and conditions of use and handling may involve other and additional considerations. No warranty of any kind is given or implied and Orica will not be liable for any damages, losses, injuries or consequential damages which may result from the use of or reliance on any information contained herein.

End of MSDS

Material Safety Data Sheet

Dyno Nobel Inc.
2650 Decker Lake Boulevard, Suite 300
Salt Lake City, Utah 84119
Phone: 801-364-4800 Fax: 801-321-6703
E-Mail: dnna.hse@am.dynonobel.com
FOR 24 HOUR EMERGENCY, CALL CHEMTREC (USA) 800-424-9300
CANUTEC (CANADA) 613-996-6666

MSDS # 1076
Date 01/24/05

Supercedes
MSDS # 1076 01/22/03

SECTION I - PRODUCT IDENTIFICATION

Trade Name(s): ELECTRIC SUPER™ COAL
ELECTRIC SUPER™ LP
ELECTRIC SUPER™ SP
ELECTRIC SUPER™ SEISMIC
ELECTRIC SUPER™ INSTANT

Product Class: Commercial Electric Detonators and Accessory Products

Product Appearance & Odor: Metal cylinder with varying length of attached plastic coated wires.

DOT Hazard Shipping Description: Detonators, Electric 1.1B UN0030 II
Or
Detonators, Electric 1.4B UN0255 II
Or
Detonators, Electric 1.4S UN0456 II

NFPA Hazard Classification: Not Applicable (See Section IV - Special Fire Fighting Procedures)

SECTION II - HAZARDOUS INGREDIENTS

Ingredients	CAS#	EXPOSURE LIMITS OSHA PEL-TWA	EXPOSURE LIMITS ACGIH TLV-TWA
Tungsten	7440-33-7	None[1]	5 mg/m^3 (TWA) 10 mg/m^3 (STEL)
Barium Chromate	10294-40-3	1 mg (CrO_3)/10m^3 (ceiling) 0.5 mg (Ba)/m^3	0.01 mg (Cr)/m^3 0.5 mg (Ba)/m^3
Lead Compounds	----------	0.5 mg (Pb)/m^3	0.5 mg (Pb)/m^3
Pentaerythritol Tetranitrate (PETN)	78-11-5	None[1]	None[2]
Boron	7440-42-8	No Value Established	No Value Established
Potassium Perchlorate[3]	7778-74-7	None[1]	None[2]
Diazodinitrophenol (DDNP)	4682-03-5	No Value Established	No Value Established
Nitrocellulose	9004-70-0	No Value Established	No Value Established

[1] Use limit for particulates not otherwise regulated (PNOR): Total dust, 15 mg/m^3 ; respirable fraction, 5 mg/m^3 .
[2] Use limit for particulates not otherwise classified (PNOC): Inhalable particulate, 10 mg/m^3 ; respirable part., 3 mg/m^3 .
[3] Not all delay periods contain perchlorate. Those that do contain between from about 4 to a maximum of about 25 mg perchlorate per detonator.

Ingredients, other than those mentioned above, as used in this product are not hazardous as defined under current Department of Labor regulations, or are present in deminimus concentrations (less than 0.1% for carcinogens, less than 1.0% for other hazardous materials).

SECTION III - PHYSICAL DATA

Boiling Point: Not Applicable
Vapor Density: Not Applicable
Percent Volatile by Volume: Not Applicable
Vapor Pressure: Not Applicable
Density: Not Applicable
Solubility in Water: Not Applicable

SECTION IV - FIRE AND EXPLOSION HAZARD DATA

Flash Point: Not Applicable
Flammable Limits: Not Applicable
Extinguishing Media: None
Special Fire Fighting Procedures: Do not attempt to fight fires involving explosive materials. Evacuate all personnel to a predetermined safe location, no less than 2,500 feet in all directions.
Unusual Fire and Explosion Hazards: Can explode or detonate under fire conditions. Burning material may produce toxic vapors.

SECTION V - HEALTH HAZARD DATA

Effects of Overexposure

This is a packaged product that will not result in exposure to the explosive material under normal conditions of use. Exposure concerns are primarily with post-detonation reaction products, particularly heavy metal compounds.

Eyes: No exposure to chemical hazards anticipated with normal handling procedures. Particulates in the eye may cause irritation, redness and tearing.
Skin: No exposure to chemical hazards anticipated with normal handling procedures.
Ingestion: No exposure to chemical hazards anticipated with normal handling procedures.
Inhalation: Not a likely route of exposure.
Systemic or Other Effects: None anticipated with normal handling procedures. Repeated inhalation or ingestion of post-detonation reaction products may lead to systemic effects such as respiratory tract irritation, ringing of the ears, dizziness, elevated blood pressure, blurred vision and tremors. Heavy metal (lead) poisoning can occur.
Carcinogenicity: ACGIH classifies Lead as a "Suspected Human Carcinogen" and insoluble Chromium VI as "Confirmed Human Carcinogen". NTP, OSHA, and IARC consider components contained in this detonator carcinogenic.
Perchlorate: Perchlorate can potentially inhibit iodide uptake by the thyroid and result in a decrease in thyroid hormone. The National Academy of Sciences (NAS) has reviewed the toxicity of perchlorate and has concluded that even the most sensitive populations could ingest up to 0.7 microgram perchlorate per kilogram of body weight per day without adversely affecting health. The USEPA must establish a maximum contaminant level (MCL) for perchlorate in drinking water by 2007, and this study by NAS may result in a recommendation of about 20 ppb for the MCL.

Emergency and First Aid Procedures

Eyes: Irrigate with running water for at least fifteen minutes. If irritation persists, seek medical attention.
Skin: Wash with soap and water.
Ingestion: Seek medical attention.
Inhalation: Not applicable.
Special Considerations: None

SECTION VI - REACTIVITY DATA

Stability: Stable under normal conditions, may explode when subjected to fire, supersonic shock or high-energy projectile impact, especially when confined or in large quantities.
Conditions to Avoid: Keep away from heat, flame, ignition sources, strong shock and electrical impulse. Do not attempt to disassemble.
Materials to Avoid (Incompatibility): Corrosives (acids and bases)
Hazardous Decomposition Products: Carbon Monoxide (CO), Nitrous Oxides (NO_x), Lead (Pb) and various oxides and complex oxides of metals.
Hazardous Polymerization: Will not occur.

SECTION VII - SPILL OR LEAK PROCEDURES

Steps to be taken in Case Material is Released or Spilled: Protect from all ignition sources. In case of fire evacuate area not less than 2,500 feet in all directions. Notify authorities in accordance with emergency response procedures. Only personnel trained in emergency response should respond. If no fire danger is present, and product is undamaged and/or uncontaminated, repackage product in original packaging or other clean DOT approved container. Ensure that a complete account of product has been made and is verified. Follow applicable Federal, State, and local spill reporting requirements.
Waste Disposal Method: Disposal must comply with Federal, State and local regulations. If product becomes a waste, it is potentially regulated as a hazardous waste as defined under the Resource Conservation and Recovery Act (RCRA) 40 CFR, part 261. Review disposal requirements with a person knowledgeable with applicable environmental law (RCRA) before disposing of any explosive material.

SECTION VIII - SPECIAL PROTECTION INFORMATION

Ventilation: Not required for normal handling.
Respiratory Protection: None normally required.
Protective Clothing: Cotton clothing is suggested.
Eye Protection: Safety glasses are recommended.
Other Precautions Required: None.

SECTION IX - SPECIAL PRECAUTIONS

Precautions to be taken in handling and storage: Store in cool, dry, well-ventilated location. Store in compliance with Federal, State, and local regulations. Keep away from heat, flame, ignition sources, strong shock, and electrical impulses.
Precautions to be taken during use: Avoid breathing the fumes or gases from detonation of explosives. Use accepted safe industry practices when using explosive materials. Unintended detonation of explosives or explosive devices can cause serious injury or death.
Other Precautions: It is recommended that users of explosive materials be familiar with the Institute of Makers of Explosives Safety Library Publications.

SECTION X - SPECIAL INFORMATION

This product contains the following substances that are subject to the reporting requirements of Section 313 of Title III of the Superfund Amendments and Reauthorization Act of 1986 and 40 CFR Part 372.

Chemical Name	CAS Number (Use Toxic Chemical Category Code)	% By Weight
Barium Compounds	N040	1.2
Lead Compounds	N420	0 – 0.59
Chromium Compounds	N090	1.2

Amount of Lead in Detonator Product Line *				
Product	Pb compounds in detonator [grams]	Pb compounds in detonator [Wt.%]	Pb in detonator [grams]	Pb in detonator [Wt. %]
Electric Super SP	0.0412	0.588%	0.0357	0.5093%
Electric Super LP	0.0412	0.588%	0.0357	0.5093%
Electric Super Coal	0.0412	0.588%	0.0357	0.5093%
Electric Super Seismic	0.0000	0.0000%	0.0000	0.0000%
Electric Super Instant	0.0000	0.0000%	0.0000	0.0000%

*Applies to only the detonator (source of lead). Do not use case weight or weight of any other component.

Disclaimer

Dyno Nobel Inc. and its subsidiaries disclaim any warranties with respect to this product, the safety or suitability thereof, the information contained herein, or the results to be obtained, whether express or implied, INCLUDING WITHOUT LIMITATION, ANY IMPLIED WARRANTY OF MERCHANTABILITY OR FITNESS FOR A PARTICULAR PURPOSE AND/OR OTHER WARRANTY. The information contained herein is provided for reference purposes only and is intended only for persons having relevant technical skills. Because conditions and manner of use are outside of our control, the user is responsible for determining the conditions of safe use of the product. Buyers and users assume all risk, responsibility and liability whatsoever from any and all injuries (including death), losses, or damages to persons or property arising from the use of this product or information. Under no circumstances shall either Dyno Nobel Inc. or any of its subsidiaries be liable for special, consequential or incidental damages or for anticipated loss of profits.

Question #17:

Provide copies of hazardous material business plans and chemical inventory forms (originals and updates) submitted by the Company to city, county, and state agencies for the Site.

Answer:

There is no hazardous material business plan or inventory forms required to be submitted by a blasting subcontractor for a site-specific job location to a city, county or state agency.

Question #18:

Please identify all leaks, spills, or other releases into the environment of any hazardous substances or pollutants or contaminants that have occurred at or from the Site. In addition, identify and provide supporting documentation of:

a. The date each release occurred;
b. The cause of each release;
c. The amount of each hazardous substance, waste, or pollutant or contaminant released during each release;
d. Where each release occurred and what areas were impacted by the release; and
e. Any and all activities undertaken in response to each release, including the notification of any local, state, or federal agencies about the release.

Answer:

To the best of my knowledge, there have been no leaks, spills or releases into the environment of any hazardous substances or pollutants to date at the Site.

Question #19:

Provide copies of all sampling and investigation reports for the Site that contain the laboratory or field analysis of the water quality of the aquifers, mine water, surface water, pit lake, tailing pond discharges and receiving streams, air quality and soil quality, including a map showing the sampling locations.

Answer:

To the best of my knowledge, there have been no sampling or investigative reports at the Site by this Company.

Question #20:

Provide records, if any, on the dewatering of the mines that provide specific information on pump rates, pump station locations, pump sizes, and changes in the aquifer pierzometric heads.

Answer:

To the best of my knowledge, there have been no dewatering operations at the Site by this Company.

Question #21:

Provide copies of the mine or quarry plans and process flow sheets used at any time and all mines or quarries within the Site

Answer:

This Company does not have or ever had any copies of the mine or quarry plans and process flow sheets.

Question #22:

If explosives were used in the Company's operations at the Site, provide a complete list of the explosives and their chemical components, the time period that the respective explosives were used, and a map showing the locations where the respective explosives were stored and detonated. Provide copies of MSDSs for the explosives.

Answer:

Explosives were used by this Company in the excavation of rock at the Site.

The information requested has been furnished in previously submitted questions. Please see the following:

- Complete list of explosives-
  - See Question 16 for MSDS of all explosives used.
- Time period explosives were used-
  - See Question 11 for the dates and number of shots per year.
- Map showing the location where explosives were stored and detonated-
  - See Question 14 for location where explosives were used.
  - There was no storage of explosives on Site for this Company.
- MSDS copies of explosives-
  - See Question 16 for MSDS of all explosives used.

Question #23:

If any substance containing perchlorate was utilized in any of the Company's operations at the Site, provide a complete description of those operations. Indicate the approximate volume of perchlorate substances used per month at the Site, the dates perchlorate substances were used, and the storage and disposal practices in effect during the Company's operations at the Site for materials containing perchlorate. Include all documentation referencing or detailing the Company's use and disposal of perchlorate-containing substances.

Answer:

MJ Baxter was hired as a Subcontractor to drill and blast at the Site. Explosives were used by this Company in the excavation of rock at the Site.

Holes were drilled in a grid pattern and loaded with different types of explosives dependent upon the type of geology, fragmentation requirements and ground conditions.

In referencing the MSDSs, there were two or three items used in the blasting operation that contained perchlorates. These items were part of the explosive powder column in the blast hole. These items were completely consumed in the blast along with the other explosive materials in the powder column. Due to the total consumption of the explosive products, no storage or disposal of any hazardous materials took place.

Enclosed is a complete list of the items that were used in each shot, at each location, the date and the quantity used of each product.

M. J. Baxter Drilling Co.

12485 Hwy 67 North
Lakeside, CA 92040

Explosives Inventory

For the period 01/01/1989 and ending 02/03/2012

Date	DWR	Qty	Item No	Description	Cost	Total
1/12/2000						
Job:	10301			HUBBS-PYRITE SHOT #1		PAUL HUBBS CONSTRUCTION
	24034					
		110	12713412	*AUSTIN HELIX PNG 90 1.75 X 12'		
		50	1271508	*AUSTIN HELIX PNG 90 1.50 X 8'		
		500	202050	*ETI ANFO-P 50#		
		625	23127516	*SEC SLURRAN 806 2.75 X 16'		
		1	5032414	ETI Riodet Elec Det 24/14		
		108	61016350	*EZDET 16 FT 25/350 ENSIGN BICK.		
		41	61024350	*EZDET 24 FT 25/350 ENSIGN BICK.		
		29	6212017	Dyno EZTL 20' MS17		
	Total for DWR#		**24034**			
Total for Job#			**10301**			

Grand Total for the period

M. J. Baxter Drilling Co.

12485 Hwy 67 North
Lakeside, CA 92040

Explosives Inventory

For the period 01/01/1989 and ending 02/03/2012

Date	DWR	Qty	Item No	Description	Cost	Total
12/5/2000						
Job:	**10302**		**HUBBS-PYRITE SHOT #02**		**PAUL HUBBS CONSTRUCTION**	
	31807					
		20	1271508	*AUSTIN HELIX PNG 90 1.50 X 8'		
		64	152050	*TROJAN 8-LU BOOSTER 1/2 LB.		
		19	152100	*Trojan 16-LU Booster 1#		
		60	154014	*TROJAN SPARTAN 88 BOOSTER 14 OZ.		
		16620	200	Alpha Miniprill Fragmax NCN w/Oil		
		400	202050	*ETI ANFO-P 50#		
		55	2312516	*SEC SLURRAN 806 2.5 X 16'		
		567	231316	*SEC SLURRAN 806 3 X 16"		
		2	5032416	ETI Riodet Elec Det 24/16		
		63	6003013C	*ENSIGN BICK. PRIMADET MS 30/13 C		
		78	6006013C	*ENSIGN BICK. PRIMADET MS 60/13 C		
		3	6008013C	*ENSIGN BICK. PRIMADET MS 80/13 C		
		45	61024350	*EZDET 24 FT 25/350 ENSIGN BICK.		
		12	6212017	Dyno EZTL 20' MS17		
		60	6212025	Dyno EZTL 20' MS25		
		18	6212067	Dyno EZTL 20' MS67		
		7	980	CONNECTING WIRE		
	Total for DWR#		**31807**			
Total for Job#			**10302**			

Grand Total for the period

M. J. Baxter Drilling Co.

12485 Hwy 67 North
Lakeside, CA 92040

Explosives Inventory

For the period 01/01/1989 and ending 02/03/2012

Date	DWR	Qty	Item No	Description
5/22/2002				
Job:	**210301**	**PYRITE QUARRY SHOT #1**		**HUBBS CONSTRUCTION**
	52127			
		38	154010	*TROJAN SPARTAN 66 BOOSTER 10.5 oz
		129	154014	*TROJAN SPARTAN 88 BOOSTER 14 OZ.
		2	1801408	SEC Detagel 1.250 X 8
		8300	202050	*ETI ANFO-P 50#
		17	2312416	*SEC SLURRAN 806 2.25 X 16'
		550	23127516	*SEC SLURRAN 806 2.75 X 16'
		2	5032417	ETI Riodet Elec Det 24/17
		72	6002013C	*ENSIGN BICK. PRIMADET MS 20/13 C
		41	6003013C	*ENSIGN BICK. PRIMADET MS 30/13 C
		56	6008013C	*ENSIGN BICK. PRIMADET MS 80/13 C
		18	6212017	Dyno EZTL 20' MS17
		40	6212025	Dyno EZTL 20' MS25
		10	6212067	Dyno EZTL 20' MS67
		9	6213017	Dyno EZTL 30' MS17
		10	980	CONNECTING WIRE

M. J. Baxter Drilling Co.

12485 Hwy 67 North
Lakeside, CA 92040

Explosives Inventory

For the period 01/01/1989 and ending 02/03/2012

Date	DWR	Qty	Item No	Description

9/16/2002

Job: 210302 PYRITE QUARRY SHOT #2 HUBBS CONSTRUCTION

52220

120	154014	*TROJAN SPARTAN 88 BOOSTER 14 OZ.
17985	204055	Alpha Fragpak-ANFO Bagged
1080	214530	*ETI FRAGMITE 5 X 30#
275	2312516	*SEC SLURRAN 806 2.5 X 16'
1	5032408	ETI Riodet Elec Det 24/08
119	6008013C	*ENSIGN BICK. PRIMADET MS 80/13 C
6	6212017	Dyno EZTL 20' MS17
5	6212025	Dyno EZTL 20' MS25
34	6212042	Dyno EZTL 20' MS42
13	6212067	Dyno EZTL 20' MS67
5	980	CONNECTING WIRE

M. J. Baxter Drilling Co.

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Explosives Inventory

For the period 01/01/1989 and ending 02/03/2012

Date	DWR	Qty	Item No	Description
3/26/2003				
Job: 310301			**Hubbs-Pyrite Quarry Shot #1**	**Paul Hubbs Construction**
	55032			
		42	154007	*TROJAN SPARTAN 44 BOOSTER 7 OZ.
		67	154014	*TROJAN SPARTAN 88 BOOSTER 14 OZ.
		55	172208	*ETI BOOSTRITE 2 X 8
		3750	202050	*ETI ANFO-P 50#
		1100	22027516	*DYNO BLASTEX 2.75 X 16"
		3300	220316	*DYNO BLASTEX 3 X 16"
		2	5110800	*Dyno Super Electric 8' 0-Inst
		17	6002013C	*ENSIGN BICK. PRIMADET MS 20/13 C
		60	6003013C	*ENSIGN BICK. PRIMADET MS 30/13 C
		77	6004013C	*ENSIGN BICK. PRIMADET MS 40/13 C
		18	6212017	Dyno EZTL 20' MS17
		9	6212025	Dyno EZTL 20' MS25
		55	6212042	Dyno EZTL 20' MS42
		5	6212067	Dyno EZTL 20' MS67
		500	970	*NOISELESS TRUNKLINE ENSIGN BICK.
		5	980	CONNECTING WIRE

M. J. Baxter Drilling Co.

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Explosives Inventory

For the period 01/01/1989 and ending 02/03/2012

Date	DWR	Qty	Item No	Description

5/29/2003

Job: 310302 Hubbs-Pyrite Quarry Shot #2 Paul Hubbs Construction

55208

54	154014	*TROJAN SPARTAN 88 BOOSTER 14 OZ.
6050	204055	Alpha Fragpak-ANFO Bagged
220	234316	*SEC 800 SLX 3 X 16
1	5110800	*Dyno Super Electric 8' 0-Inst
54	6006013C	*ENSIGN BICK. PRIMADET MS 60/13 C
4	6212017	Dyno EZTL 20' MS17
8	6212025	Dyno EZTL 20' MS25
39	6212042	Dyno EZTL 20' MS42
3	980	CONNECTING WIRE

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Explosives Inventory

For the period 01/01/1989 and ending 02/03/2012

Date	DWR	Qty	Item No	Description

8/18/2003

Job: 310303 Hubbs-Pyrite Quarry Shot #3 Paul Hubbs Construction

54985

54	154014	*TROJAN SPARTAN 88 BOOSTER 14 OZ.
43	180208	SEC Detagel 2 X 8'
17080	200	Alpha Miniprill Fragmax NCN w/Oil
110	234316	*SEC 800 SLX 3 X 16
1	5110800	*Dyno Super Electric 8' 0-Inst
16	6003013C	*ENSIGN BICK. PRIMADET MS 30/13 C
45	6004013C	*ENSIGN BICK. PRIMADET MS 40/13 C
32	6006013C	*ENSIGN BICK. PRIMADET MS 60/13 C
66	6212017	Dyno EZTL 20' MS17
12	6212025	Dyno EZTL 20' MS25
12	6212042	Dyno EZTL 20' MS42
5	980	CONNECTING WIRE

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Explosives Inventory

For the period 01/01/1989 and ending 02/03/2012

Date	DWR	Qty	Item No	Description

2/17/2004

Job: 410301 Hubbs-Pyrite Quarry Shot #1 Paul Hubbs Construction

57760

36	154007	*TROJAN SPARTAN 44 BOOSTER 7 OZ.
160	154014	*TROJAN SPARTAN 88 BOOSTER 14 OZ.
19260	200	Alpha Miniprill Fragmax NCN w/Oil
2035	202050	*ETI ANFO-P 50#
495	204055	Alpha Fragpak-ANFO Bagged
275	236316	*SEC Slurran XG 3 x 16
1	5110800	*Dyno Super Electric 8' 0-Inst
55	6604018	*Orica Exel MS 40' #18
21	6605018	*Orica Exel MS 50' #18
82	6608018	*Orica Exel MS 80' #18
11	6672017	Orica Connectadet 20' MS17
20	6672025	Orica Connectadet 20' MS25
43	6672042	Orica Connectadet 20' MS42
6	6672065	Orica Connectadet 20' MS65
5	980	CONNECTING WIRE

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Explosives Inventory

For the period 01/01/1989 and ending 02/03/2012

Date	DWR	Qty	Item No	Description
6/11/2004				
Job:	**410302**		**Hubbs-Pyrite Quarry Shot #2**	**Paul Hubbs Construction**
	59257			
		53	154007	*TROJAN SPARTAN 44 BOOSTER 7 OZ.
		6450	206050	*WESCO ANFO 50# BAG
		110	2362516	*SEC Slurran XG 2.5 x 16"
		1	5110800	*Dyno Super Electric 8' 0-Inst
		21	6604018	*Orica Exel MS 40' #18
		32	6606018	*Orica Exel MS 60' #18
		24	6672025	Orica Connectadet 20' MS25
		10	6672065	Orica Connectadet 20' MS65
		3	980	CONNECTING WIRE

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Explosives Inventory

For the period 01/01/1989 and ending 02/03/2012

Date	DWR	Qty	Item No	Description
6/30/2004				
Job: 410303			**Hubbs-Pyrite Quarry Shot #3**	**Paul Hubbs Construction**
	59377			
		100	150050	*Orica Pentex CD Booster 8*227
		113	150100	*Orica Pentex CD Booster 16*454
		8200	202050	*ETI ANFO-P 50#
		5200	204055	Alpha Fragpak-ANFO Bagged
		45	2362516	*SEC Slurran XG 2.5 x 16"
		3	5110800	*Dyno Super Electric 8' 0-Inst
		63	6602018	*Orica Exel MS 20' #18
		75	6603018	Orica Exel MS 30' #18
		12	6604018	*Orica Exel MS 40' #18
		64	6606018	*Orica Exel MS 60' #18
		9	6672017	Orica Connectadet 20' MS17
		8	6672025	Orica Connectadet 20' MS25
		120	6672025	Orica Connectadet 20' MS25
		5	980	CONNECTING WIRE

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Explosives Inventory

For the period 01/01/1989 and ending 02/03/2012

Date	DWR	Qty	Item No	Description
11/5/2004				
Job: 410304			**Hubbs-Pyrite Quarry Shot #4**	**Paul Hubbs Construction**
	61380			
		15	150050	*Orica Pentex CD Booster 8*227
		116	150100	*Orica Pentex CD Booster 16*454
		7000	200	Alpha Miniprill Fragmax NCN w/Oil
		55	204055	Alpha Fragpak-ANFO Bagged
		1485	236316	*SEC Slurran XG 3 x 16
		1	5110800	*Dyno Super Electric 8' 0-Inst
		26	6602018	*Orica Exel MS 20' #18
		104	6603018	Orica Exel MS 30' #18
		5	6672017	Orica Connectadet 20' MS17
		16	6672025	Orica Connectadet 20' MS25
		98	6672042	Orica Connectadet 20' MS42

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Explosives Inventory

For the period 01/01/1989 and ending 02/03/2012

Date	DWR	Qty	Item No	Description
11/16/2004				
Job: 410305			**Hubbs-Pyrite Quarry Shot #5**	**Paul Hubbs Construction**
	61387			
		98	150050	*Orica Pentex CD Booster 8*227
		128	150100	*Orica Pentex CD Booster 16*454
		15840	200	Alpha Miniprill Fragmax NCN w/Oil
		1265	236316	*SEC Slurran XG 3 x 16
		1	5110800	*Dyno Super Electric 8' 0-Inst
		93	6602018	*Orica Exel MS 20' #18
		4	6603018	Orica Exel MS 30' #18
		88	6604018	*Orica Exel MS 40' #18
		41	6606018	*Orica Exel MS 60' #18
		3	6672017	Orica Connectadet 20' MS17
		20	6672025	Orica Connectadet 20' MS25
		86	6672042	Orica Connectadet 20' MS42
		17	6672065	Orica Connectadet 20' MS65
		250	970	*NOISELESS TRUNKLINE ENSIGN BICK.
		5	980	CONNECTING WIRE

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Explosives Inventory

For the period 01/01/1989 and ending 02/03/2012

Date	DWR	Qty	Item No	Description

12/6/2004

Job: 410306 Hubbs-Pyrite Quarry Shot #6 Paul Hubbs Construction

58881

73	150050	*Orica Pentex CD Booster 8*227
76	150100	*Orica Pentex CD Booster 16*454
17760	200	Alpha Miniprill Fragmax NCN w/Oil
1026	236316	*SEC Slurran XG 3 x 16
1	5110800	*Dyno Super Electric 8' 0-Inst
72	6604018	*Orica Exel MS 40' #18
6	6606018	*Orica Exel MS 60' #18
70	6608018	*Orica Exel MS 80' #18
2	6672017	Orica Connectadet 20' MS17
45	6672025	Orica Connectadet 20' MS25
14	6672042	Orica Connectadet 20' MS42
12	6672065	Orica Connectadet 20' MS65
5	980	CONNECTING WIRE

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Explosives Inventory

For the period 01/01/1989 and ending 02/03/2012

Date	DWR	Qty	Item No	Description

12/10/2004

Job: 410307 Hubbs-Pyrite Quarry Shot #7 Paul Hubbs Construction

58886

42	150050	*Orica Pentex CD Booster 8*227
69	150100	*Orica Pentex CD Booster 16*454
7740	200	Alpha Miniprill Fragmax NCN w/Oil
110	236316	*SEC Slurran XG 3 x 16
1	5110800	*Dyno Super Electric 8' 0-Inst
42	6602018	*Orica Exel MS 20' #18
69	6604018	*Orica Exel MS 40' #18
1	6672017	Orica Connectadet 20' MS17
13	6672025	Orica Connectadet 20' MS25
56	6672042	Orica Connectadet 20' MS42
3	980	CONNECTING WIRE

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Explosives Inventory

For the period 01/01/2005 and ending 02/03/2012

Date	DWR	Qty	Item No	Description	Cost	Total
3/10/2005						
Job:	**510301**			**Hubbs-Pyrite Quarry Shot #1**		**Paul Hubbs Construction**
	60062					
		49	150050	*Orica Pentex CD Booster 8*227		
		60	152100	*Trojan 16-LU Booster 1#		
		10880	200	Alpha Miniprill Fragmax NCN w/Oil		
		880	236316	*SEC Slurran XG 3 x 16		
		1	5110800	*Dyno Super Electric 8' 0-Inst		
		21	6602018	*Orica Exel MS 20' #18		
		39	6604018	*Orica Exel MS 40' #18		
		49	6608018	*Orica Exel MS 80' #18		
		6	6672017	Orica Connectadet 20' MS17		
		23	6672025	Orica Connectadet 20' MS25		
		29	6672042	Orica Connectadet 20' MS42		
		1	6672065	Orica Connectadet 20' MS65		
		250	970	*NOISELESS TRUNKLINE ENSIGN BICK.		
		5	980	CONNECTING WIRE		
	Total for DWR#			**60062**		
Total for Job#				**510301**		

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Explosives Inventory

For the period 01/01/2005 and ending 02/03/2012

Date	DWR	Qty	Item No	Description	Cost	Total
3/17/2005						
Job:	**510302**			**Hubbs-Pyrite Quarry Shot #2**	**Paul Hubbs Construction**	
	60066					
		72	150050	*Orica Pentex CD Booster 8*227		
		80	152100	*Trojan 16-LU Booster 1#		
		7480	200	Alpha Miniprill Fragmax NCN w/Oil		
		1125	236316	*SEC Slurran XG 3 x 16		
		1	5110800	*Dyno Super Electric 8' 0-Inst		
		80	6603018	Orica Exel MS 30' #18		
		8	6604018	*Orica Exel MS 40' #18		
		66	6606018	*Orica Exel MS 60' #18		
		12	6672017	Orica Connectadet 20' MS17		
		22	6672025	Orica Connectadet 20' MS25		
		36	6672042	Orica Connectadet 20' MS42		
		15	6672065	Orica Connectadet 20' MS65		
		100	970	*NOISELESS TRUNKLINE ENSIGN BICK.		
		7	980	CONNECTING WIRE		
	Total for DWR#			**60066**		
Total for Job#				**510302**		

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Explosives Inventory

For the period 01/01/2005 and ending 02/03/2012

Date	DWR	Qty	Item No	Description	Cost	Total
3/29/2005						
Job:	**510303**			**Hubbs-Pyrite Quarry Shot #3**	**Paul Hubbs Construction**	
	60074					
		81	150050	*Orica Pentex CD Booster 8*227		
		87	152100	*Trojan 16-LU Booster 1#		
		3750	206050	*WESCO ANFO 50# BAG		
		3850	236316	*SEC Slurran XG 3 x 16		
		1	5110800	*Dyno Super Electric 8' 0-Inst		
		78	6602018	*Orica Exel MS 20' #18		
		19	6603018	Orica Exel MS 30' #18		
		72	6606018	*Orica Exel MS 60' #18		
		17	6672017	Orica Connectadet 20' MS17		
		6	6672025	Orica Connectadet 20' MS25		
		51	6672042	Orica Connectadet 20' MS42		
		6	6672065	Orica Connectadet 20' MS65		
		100	970	*NOISELESS TRUNKLINE ENSIGN BICK.		
		5	980	CONNECTING WIRE		
	Total for DWR#			**60074**		
Total for Job#				**510303**		

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Explosives Inventory

For the period 01/01/2005 and ending 02/03/2012

Date	DWR	Qty	Item No	Description	Cost	Total
4/20/2005						
Job:	**510304**			**Hubbs-Pyrite Quarry Shot #4**	**Paul Hubbs Construction**	
	59117					
		34	1101516	*Dyno Tx 1.5 x 16"		
		144	150100	*Orica Pentex CD Booster 16*454		
		16840	200	Alpha Miniprill Fragmax NCN w/Oil		
		2000	206050	*WESCO ANFO 50# BAG		
		1	5032420	ETI Riodet Elec Det 24/20		
		12	6602018	*Orica Exel MS 20' #18		
		32	66524500	Orica Handidet 24' #500		
		35	66530500	Orica Handidet 30' #500		
		25	66540500	Orica Handidet 40' #500		
		18	66550500	*Orica Handidet 50' #500		
		39	66560500	Orica Handidet 60' #500		
		18	6672017	Orica Connectadet 20' MS17		
		9	6672025	Orica Connectadet 20' MS25		
		5	980	CONNECTING WIRE		
	Total for DWR#			**59117**		
Total for Job#				**510304**		

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Explosives Inventory

For the period 01/01/2005 and ending 02/03/2012

Date	DWR	Qty	Item No	Description	Cost	Total
5/6/2005						
Job: 510305				**Hubbs-Pyrite Quarry Shot #5**		**Paul Hubbs Construction**
	61785					
		30	152090	*TROJAN 90 GRAM LU CAST BOOSTER		
		101	152100	*Trojan 16-LU Booster 1#		
		86	180208	SEC Detagel 2 X 8'		
		11740	200	Alpha Miniprill Fragmax NCN w/Oil		
		2420	236316	*SEC Slurran XG 3 x 16		
		1	5110800	*Dyno Super Electric 8' 0-Inst		
		95	6602018	*Orica Exel MS 20' #18		
		3	6603018	Orica Exel MS 30' #18		
		43	6604018	*Orica Exel MS 40' #18		
		67	6606018	*Orica Exel MS 60' #18		
		8	6672017	Orica Connectadet 20' MS17		
		12	6672025	Orica Connectadet 20' MS25		
		80	6672042	Orica Connectadet 20' MS42		
		9	6672065	Orica Connectadet 20' MS65		
		200	970	*NOISELESS TRUNKLINE ENSIGN BICK.		
	Total for DWR#		**61785**			
Total for Job#			**510305**			

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Explosives Inventory

For the period 01/01/2005 and ending 02/03/2012

Date	DWR	Qty	Item No	Description	Cost	Total
5/18/2005						
Job:	**510306**			**Hubbs-Pyrite Quarry Shot #6**	**Paul Hubbs Construction**	
	61796					
		108	152100	*Trojan 16-LU Booster 1#		
		103	180208	SEC Detagel 2 X 8'		
		15460	200	Alpha Miniprill Fragmax NCN w/Oil		
		440	2362516	*SEC Slurran XG 2.5 x 16"		
		2695	236316	*SEC Slurran XG 3 x 16		
		1	5110800	*Dyno Super Electric 8' 0-Inst		
		57	6603018	Orica Exel MS 30' #18		
		23	6604018	*Orica Exel MS 40' #18		
		98	6606018	*Orica Exel MS 60' #18		
		4	6672017	Orica Connectadet 20' MS17		
		6	6672025	Orica Connectadet 20' MS25		
		78	6672042	Orica Connectadet 20' MS42		
		10	6672065	Orica Connectadet 20' MS65		
		3	980	CONNECTING WIRE		
	Total for DWR#			**61796**		
Total for Job#				**510306**		

Grand Total for the period

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Explosives Inventory

For the period 01/01/2005 and ending 02/03/2012

Date	DWR	Qty	Item No	Description	Cost	Total
6/16/2005						
Job: 510307				**Hubbs-Pyrite Quarry Shot #7**	**Paul Hubbs Construction**	
	60898					
		171	150050	*Orica Pentex CD Booster 8*227		
		11860	200	Alpha Miniprill Fragmax NCN w/Oil		
		825	236316	*SEC Slurran XG 3 x 16		
		1	5110800	*Dyno Super Electric 8' 0-Inst		
		70	6602018	*Orica Exel MS 20' #18		
		38	6604018	*Orica Exel MS 40' #18		
		63	6606018	*Orica Exel MS 60' #18		
		2	6672017	Orica Connectadet 20' MS17		
		20	6672025	Orica Connectadet 20' MS25		
		72	6672042	Orica Connectadet 20' MS42		
		14	6672065	Orica Connectadet 20' MS65		
		5	980	CONNECTING WIRE		
	Total for DWR#		**60898**			
Total for Job#			**510307**			

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Explosives Inventory

For the period 01/01/2005 and ending 02/03/2012

Date	DWR	Qty	Item No	Description	Cost	Total
11/3/2005						
Job:	**510313**			**Hubbs-Pyrite Quarry Shot #13**	**Paul Hubbs Construction**	
	62195					
		36	150050	*Orica Pentex CD Booster 8*227		
		45	152100	*Trojan 16-LU Booster 1#		
		9080	200	Alpha Miniprill Fragmax NCN w/Oil		
		255	236316	*SEC Slurran XG 3 x 16		
		1	5110800	*Dyno Super Electric 8' 0-Inst		
		41	6603018	Orica Exel MS 30' #18		
		10	6606018	*Orica Exel MS 60' #18		
		30	6608018	*Orica Exel MS 80' #18		
		14	6672025	Orica Connectadet 20' MS25		
		28	6672042	Orica Connectadet 20' MS42		
		4	980	CONNECTING WIRE		
	Total for DWR#			**62195**		
Total for Job#				**510313**		

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Explosives Inventory

For the period 01/01/2005 and ending 02/03/2012

Date	DWR	Qty	Item No	Description	Cost	Total
11/9/2005						
Job:	**510314**			**Hubbs-Pyrite Quarry Shot #14**		**Paul Hubbs Construction**
	60971					
		24	1801508	SEC Detagel 1.5 X 8'		
		110	180208	SEC Detagel 2 X 8'		
		6380	204055	Alpha Fragpak-ANFO Bagged		
		1	5110800	*Dyno Super Electric 8' 0-Inst		
		60	66530500	Orica Handidet 30' #500		
		50	66540500	Orica Handidet 40' #500		
		10	6671217	Orica Connectadet 12' MS17		
		5	980	CONNECTING WIRE		
	Total for DWR#			**60971**		
Total for Job#				**510314**		

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Explosives Inventory

For the period 01/01/2005 and ending 02/03/2012

Date	DWR	Qty	Item No	Description	Cost	Total

11/15/2005

Job: 510315 Hubbs-Pyrite Quarry Shot #15 Paul Hubbs Construction

62253

78	150050	*Orica Pentex CD Booster 8*227
7080	200	Alpha Miniprill Fragmax NCN w/Oil
4840	236316	*SEC Slurran XG 3 x 16
1	5110800	*Dyno Super Electric 8' 0-Inst
55	6602018	*Orica Exel MS 20' #18
5	6603018	Orica Exel MS 30' #18
31	6604018	*Orica Exel MS 40' #18
77	6606018	*Orica Exel MS 60' #18
3	6672017	Orica Connectadet 20' MS17
15	6672025	Orica Connectadet 20' MS25
60	6672042	Orica Connectadet 20' MS42
2	6672065	Orica Connectadet 20' MS65
3	980	CONNECTING WIRE

Total for DWR# 62253

Total for Job# 510315

Grand Total for the period

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Explosives Inventory

For the period 01/01/2005 and ending 02/03/2012

Date	DWR	Qty	Item No	Description	Cost	Total
12/2/2005						
Job: 510316				**Hubbs-Pyrite Quarry Shot #16**	**Paul Hubbs Construction**	
	62476					
		49	150050	*Orica Pentex CD Booster 8*227		
		100	152100	*Trojan 16-LU Booster 1#		
		17720	200	Alpha Miniprill Fragmax NCN w/Oil		
		1	5110800	*Dyno Super Electric 8' 0-Inst		
		50	6603018	Orica Exel MS 30' #18		
		61	6604018	*Orica Exel MS 40' #18		
		40	6606018	*Orica Exel MS 60' #18		
		3	6671209	Orica Connectadet 12' MS9		
		11	6672017	Orica Connectadet 20' MS17		
		23	6672025	Orica Connectadet 20' MS25		
		34	6672042	Orica Connectadet 20' MS42		
		30	6672065	Orica Connectadet 20' MS65		
		5	980	CONNECTING WIRE		
	Total for DWR#			**62476**		
Total for Job#				**510316**		

Grand Total for the period

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Explosives Inventory

For the period 01/01/2005 and ending 02/03/2012

Date	DWR	Qty	Item No	Description	Cost	Total
12/9/2005						
Job:	**510317**			**Hubbs-Pyrite Quarry Shot #17**	**Paul Hubbs Construction**	
	62482					
		14440	200	Alpha Miniprill Fragmax NCN w/Oil		
		1	5110800	*Dyno Super Electric 8' 0-Inst		
		30	6602018	*Orica Exel MS 20' #18		
		39	6603018	Orica Exel MS 30' #18		
		27	6604018	*Orica Exel MS 40' #18		
		37	6606018	*Orica Exel MS 60' #18		
		1	6671209	Orica Connectadet 12' MS9		
		5	6672017	Orica Connectadet 20' MS17		
		71	6672025	Orica Connectadet 20' MS25		
		9	6672042	Orica Connectadet 20' MS42		
		8	6672065	Orica Connectadet 20' MS65		
		5	980	CONNECTING WIRE		
	Total for DWR#			**62482**		
Total for Job#				**510317**		

Grand Total for the period

M. J. Baxter Drilling Co.

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Explosives Inventory

For the period 01/01/2005 and ending 02/03/2012

Date	DWR	Qty	Item No	Description	Cost	Total
12/29/2005						
Job:	**510318**			**Hubbs-Pyrite Quarry Shot #18**	**Paul Hubbs Construction**	
	62496					
		34	150050	*Orica Pentex CD Booster 8*227		
		81	152100	*Trojan 16-LU Booster 1#		
		15	180208	SEC Detagel 2 X 8'		
		17340	200	Alpha Miniprill Fragmax NCN w/Oil		
		165	204055	Alpha Fragpak-ANFO Bagged		
		110	2362516	*SEC Slurran XG 2.5 x 16"		
		110	236316	*SEC Slurran XG 3 x 16		
		1750	305050	*Austin Reinforced Cord 50 Grain		
		33	6602018	*Orica Exel MS 20' #18		
		17	6603018	Orica Exel MS 30' #18		
		18	6604018	*Orica Exel MS 40' #18		
		23	6606018	*Orica Exel MS 60' #18		
		23	6608018	*Orica Exel MS 80' #18		
		15	6672017	Orica Connectadet 20' MS17		
		60	6672025	Orica Connectadet 20' MS25		
		2	6672042	Orica Connectadet 20' MS42		
		1100	972	*Orica Exel Noiseless LIL Det 493'/Roll		
	Total for DWR#		**62496**			
Total for Job#			**510318**			

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Explosives Inventory

For the period 01/01/2005 and ending 02/03/2012

Date	DWR	Qty	Item No	Description	Cost	Total
12/30/2005						
Job: 510319				**Hubbs-Pyrite Quarry Shot #19**	**Paul Hubbs Construction**	
	62279					
		55	180208	SEC Detagel 2 X 8'		
		550	204055	Alpha Fragpak-ANFO Bagged		
		2	5110800	*Dyno Super Electric 8' 0-Inst		
		17	6602018	*Orica Exel MS 20' #18		
		20	66516500	Orica Handidet 16' #500		
		20	66524500	Orica Handidet 24' #500		
		14	6671217	Orica Connectadet 12' MS17		
		8	6672017	Orica Connectadet 20' MS17		
		8	980	CONNECTING WIRE		
	Total for DWR#			**62279**		
Total for Job#				**510319**		

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Explosives Inventory

For the period 01/01/2005 and ending 02/03/2012

Date	DWR	Qty	Item No	Description	Cost	Total
4/20/2006						
Job: 610301				**Hubbs-Pyrite Quarry Shot #1**	**Paul Hubbs Construction**	
	63037					
		60	150050	*Orica Pentex CD Booster 8*227		
		87	151100	*Accurate Booster 1#		
		10	180208	SEC Detagel 2 X 8'		
		13020	200	Alpha Miniprill Fragmax NCN w/Oil		
		1045	236316	*SEC Slurran XG 3 x 16		
		1	5110800	*Dyno Super Electric 8' 0-Inst		
		13	6602018	*Orica Exel MS 20' #18		
		62	6603018	Orica Exel MS 30' #18		
		84	6606018	*Orica Exel MS 60' #18		
		4	6671209	Orica Connectadet 12' MS9		
		5	6672017	Orica Connectadet 20' MS17		
		9	6672025	Orica Connectadet 20' MS25		
		56	6672042	Orica Connectadet 20' MS42		
		18	6672065	Orica Connectadet 20' MS65		
		100	972	*Orica Exel Noiseless LIL Det 493'/Roll		
		7	980	CONNECTING WIRE		
	Total for DWR#		**63037**			
Total for Job#			**610301**			

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Explosives Inventory

For the period 01/01/2005 and ending 02/03/2012

Date	DWR	Qty	Item No	Description	Cost	Total
5/3/2006						
Job:	**610302**			**Hubbs-Pyrite Quarry Shot #2**		**Paul Hubbs Cons**
	63048					
		34	150050	*Orica Pentex CD Booster 8*227		
		115	151100	*Accurate Booster 1#		
		17320	200	Alpha Miniprill Fragmax NCN w/Oil		
		990	236316	*SEC Slurran XG 3 x 16		
		1	5110800	*Dyno Super Electric 8' 0-Inst		
		23	6603018	Orica Exel MS 30' #18		
		95	6604018	*Orica Exel MS 40' #18		
		29	6606018	*Orica Exel MS 60' #18		
		4	6672017	Orica Connectadet 20' MS17		
		17	6672025	Orica Connectadet 20' MS25		
		83	6672042	Orica Connectadet 20' MS42		
		26	6672065	Orica Connectadet 20' MS65		
		5	980	CONNECTING WIRE		
	Total for DWR#		**63048**			
Total for Job#			**610302**			

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Explosives Inventory

For the period 01/01/2005 and ending 02/03/2012

Date	DWR	Qty	Item No	Description	Cost	Total
5/9/2006						
Job:	**610303**			**Hubbs-Pyrite Quarry Shot #3**	**Paul Hubbs Construction**	
	63078					
		75	150050	*Orica Pentex CD Booster 8*227		
		75	150100	*Orica Pentex CD Booster 16*454		
		10980	200	Alpha Miniprill Fragmax NCN w/Oil		
		935	236316	*SEC Slurran XG 3 x 16		
		1	5110800	*Dyno Super Electric 8' 0-Inst		
		57	6603018	Orica Exel MS 30' #18		
		18	6604018	*Orica Exel MS 40' #18		
		75	6606018	*Orica Exel MS 60' #18		
		17	6672025	Orica Connectadet 20' MS25		
		39	6672042	Orica Connectadet 20' MS42		
		18	6672065	Orica Connectadet 20' MS65		
		5	980	CONNECTING WIRE		
	Total for DWR#			**63078**		
Total for Job#				**610303**		

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Explosives Inventory

For the period 01/01/2005 and ending 02/03/2012

Date	DWR	Qty	Item No	Description	Cost	Total
1/17/2006						
Job:	**610401**		**Hubbs/Harlow Quarry Shot #1**		**Paul Hubbs Construction**	
	62860					
		33	150050	*Orica Pentex CD Booster 8*227		
		42	152100	*Trojan 16-LU Booster 1#		
		5610	204055	Alpha Fragpak-ANFO Bagged		
		3750	233530	SEC 600-20A SLX 5" x 30#		
		1	5110800	*Dyno Super Electric 8' 0-Inst		
		6	6603018	Orica Exel MS 30' #18		
		21	6604018	*Orica Exel MS 40' #18		
		14	6606018	*Orica Exel MS 60' #18		
		34	6608018	*Orica Exel MS 80' #18		
		1	6671209	Orica Connectadet 12' MS9		
		10	6672017	Orica Connectadet 20' MS17		
		10	6672025	Orica Connectadet 20' MS25		
		14	6672042	Orica Connectadet 20' MS42		
		4	6672065	Orica Connectadet 20' MS65		
		4	980	CONNECTING WIRE		
	Total for DWR#		**62860**			
	Total for Job#		**610401**			

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Explosives Inventory

For the period 01/01/2005 and ending 02/03/2012

Date	DWR	Qty	Item No	Description	Cost	Total
6/28/2005						
Job: 510308				**Hubbs-Pyrite Quarry Shot #8**		**Paul Hubbs Construction**
	61057					
		169	150050	*Orica Pentex CD Booster 8*227		
		7100	200	Alpha Miniprill Fragmax NCN w/Oil		
		605	204055	Alpha Fragpak-ANFO Bagged		
		1	5110800	*Dyno Super Electric 8' 0-Inst		
		136	6602018	*Orica Exel MS 20' #18		
		33	6603018	Orica Exel MS 30' #18		
		2	6672017	Orica Connectadet 20' MS17		
		15	6672025	Orica Connectadet 20' MS25		
		153	6672042	Orica Connectadet 20' MS42		
		250	970	*NOISELESS TRUNKLINE ENSIGN BICK.		
		3	980	CONNECTING WIRE		
	Total for DWR#			**61057**		
Total for Job#				**510308**		

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Explosives Inventory

For the period 01/01/2005 and ending 02/03/2012

Date	DWR	Qty	Item No	Description	Cost	Total
8/24/2005						
Job: 510309				**Hubbs-Pyrite Quarry Shot #9**	**Paul Hubbs Construction**	
	61960					
		70	152100	*Trojan 16-LU Booster 1#		
		14260	200	Alpha Miniprill Fragmax NCN w/Oil		
		495	236316	*SEC Slurran XG 3 x 16		
		1	5110800	*Dyno Super Electric 8' 0-Inst		
		50	6604018	*Orica Exel MS 40' #18		
		70	6608018	*Orica Exel MS 80' #18		
		19	6672017	Orica Connectadet 20' MS17		
		4	6672025	Orica Connectadet 20' MS25		
		45	6672042	Orica Connectadet 20' MS42		
		2	6672065	Orica Connectadet 20' MS65		
		4	980	CONNECTING WIRE		
	Total for DWR#			**61960**		
Total for Job#				**510309**		

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Explosives Inventory

For the period 01/01/2005 and ending 02/03/2012

Date	DWR	Qty	Item No	Description	Cost	Total
9/21/2005						
Job:	**510310**			**Hubbs-Pyrite Quarry Shot #10**	**Paul Hubbs Construction**	
	62055					
		236	150050	*Orica Pentex CD Booster 8*227		
		20040	200	Alpha Miniprill Fragmax NCN w/Oil		
		1	5110800	*Dyno Super Electric 8' 0-Inst		
		111	6602018	*Orica Exel MS 20' #18		
		125	6604018	*Orica Exel MS 40' #18		
		114	6671242	Orica Connectadet 12' MS42		
		3	6672017	Orica Connectadet 20' MS17		
		12	6672025	Orica Connectadet 20' MS25		
		3	980	CONNECTING WIRE		
	Total for DWR#		**62055**			
Total for Job#			**510310**			

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Explosives Inventory

For the period 01/01/2005 and ending 02/03/2012

Date	DWR	Qty	Item No	Description	Cost	Total
10/6/2005						
Job: 510311				**Hubbs-Pyrite Quarry Shot #11**	**Paul Hubbs Construction**	
	62071					
		129	150050	*Orica Pentex CD Booster 8*227		
		119	152100	*Trojan 16-LU Booster 1#		
		7790	200	Alpha Miniprill Fragmax NCN w/Oil		
		340	204055	Alpha Fragpak-ANFO Bagged		
		7150	204055	Alpha Fragpak-ANFO Bagged		
		186	2362516	*SEC Slurran XG 2.5 x 16"		
		3355	236316	*SEC Slurran XG 3 x 16		
		1	5110800	*Dyno Super Electric 8' 0-Inst		
		48	6602018	*Orica Exel MS 20' #18		
		71	6603018	Orica Exel MS 30' #18		
		13	6604018	*Orica Exel MS 40' #18		
		107	6606018	*Orica Exel MS 60' #18		
		8	6608018	*Orica Exel MS 80' #18		
		20	6672017	Orica Connectadet 20' MS17		
		14	6672025	Orica Connectadet 20' MS25		
		94	6672042	Orica Connectadet 20' MS42		
		200	970	*NOISELESS TRUNKLINE ENSIGN BICK.		
	Total for DWR#		**62071**			
Total for Job#			**510311**			

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Explosives Inventory

For the period 01/01/2005 and ending 02/03/2012

Date	DWR	Qty	Item No	Description	Cost	Total
10/13/2005						
Job:	**510312**			**Hubbs-Pyrite Quarry Shot #12**	**Paul Hubbs Construction**	
	62181					
		9	150050	*Orica Pentex CD Booster 8*227		
		66	152100	*Trojan 16-LU Booster 1#		
		46	180208	SEC Detagel 2 X 8'		
		13530	204055	Alpha Fragpak-ANFO Bagged		
		1	5110800	*Dyno Super Electric 8' 0-Inst		
		15	6602018	*Orica Exel MS 20' #18		
		30	6603018	Orica Exel MS 30' #18		
		46	6604018	*Orica Exel MS 40' #18		
		28	6606018	*Orica Exel MS 60' #18		
		2	6671209	Orica Connectadet 12' MS9		
		7	6672017	Orica Connectadet 20' MS17		
		4	6672025	Orica Connectadet 20' MS25		
		65	6672042	Orica Connectadet 20' MS42		
		5	980	CONNECTING WIRE		
	Total for DWR#			**62181**		
Total for Job#				**510312**		

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Explosives Inventory

For the period 01/01/2005 and ending 02/03/2012

Date	DWR	Qty	Item No	Description	Cost	Total
10/31/2006						
Job:	**610402**			**Hubbs/Harlow Quarry Shot #2**	**Paul Hubbs Construction**	
	64317					
		140	151100	*Accurate Booster 1#		
		6120	200	Alpha Miniprill Fragmax NCN w/Oil		
		1600	233420	SEC 600-20A 4" X 20#		
		9540	233530	SEC 600-20A SLX 5" x 30#		
		1	5110800	*Dyno Super Electric 8' 0-Inst		
		15	6003014	*Dyno Primadet MS 30/14		
		30	6004014	*Dyno Primadet MS 40/14		
		45	6006014	*Dyno Primadet MS 60/14		
		50	6108025500	*Dyno EZ Dets 80' 25/500		
		55	6211209	EZTL 12' MS09 Ensign Bickford		
		4	6211217	Dyno EZTL 12' MS17		
		16	6212025	Dyno EZTL 20' MS25		
		5	6212067	Dyno EZTL 20' MS67		
		4	980	CONNECTING WIRE		
	Total for DWR#		**64317**			
Total for Job#			**610402**			

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Explosives Inventory

For the period 01/01/1990 and ending 02/03/2012

Date	DWR	Qty	Item No	Description	Cost	Total
2/15/2007						
Job:	**710201**		**Gail Materials/PyriteQuarry Shot 1**		**Gail Materials (Pyrite Quarry)**	
	64448					
		78	151050	*Accurrate Booster 1/2#		
		55	180208	SEC Detagel 2 X 8'		
		10395	204055	Alpha Fragpak-ANFO Bagged		
		110	236316	*SEC Slurran XG 3 x 16		
		1	5110800	*Dyno Super Electric 8' 0-Inst		
		21	6102425500	*Dyno EZ Dets 24' 25/500		
		40	6103025500	*Dyno EZ Dets 30' 25/500		
		30	6104025500	*Dyno EZ Dets 40' 25/500		
		39	6105025500	*Dyno EZ Dets 50' 25/500		
		7	6211217	Dyno EZTL 12' MS17		
		4	6211242	Dyno EZTL 12' MS42		
		100	972	*Orica Exel Noiseless LIL Det 493'/Roll		
		3	980	CONNECTING WIRE		
	Total for DWR#		**64448**			
Total for Job#			**710201**			

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Explosives Inventory

For the period 01/01/1990 and ending 02/03/2012

Date	DWR	Qty	Item No	Description	Cost	Total
6/26/2007						
Job: 710202				**Gail Materials/PyriteQuarry Shot 2**	**Gail Materials (Pyrite Quarry)**	
	65601					
		220	183216	*SEC M919 2X16 2.12 lbs/stick		
		6325	204055	Alpha Fragpak-ANFO Bagged		
		1500	205050	Alphamix-Anfo 50lbs		
		1	5110800	*Dyno Super Electric 8' 0-Inst		
		22	6101625500	*Dyno EZ Dets 16' 25/500		
		77	6102425500	*Dyno EZ Dets 24' 25/500		
		62	6103025500	*Dyno EZ Dets 30' 25/500		
		30	6104025500	*Dyno EZ Dets 40' 25/500		
		4	6211217	Dyno EZTL 12' MS17		
		11	6211242	Dyno EZTL 12' MS42		
		3	980	CONNECTING WIRE		
	Total for DWR#		**65601**			
Total for Job#			**710202**			

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Explosives Inventory

For the period 01/01/1990 and ending 02/03/2012

Date	DWR	Qty	Item No	Description	Cost	Total
7/11/2007						
Job:	**710203**			**Gail Materials/PyriteQuarry Shot 3**	**Gail Materials (Pyrite Quarry)**	
	65609					
		35	151033	Accurate Booster 1/3#		
		37	151050	*Accurrate Booster 1/2#		
		55.12	183216	*SEC M919 2X16 2.12 lbs/stick		
		7480	204055	Alpha Fragpak-ANFO Bagged		
		1133	237316	SEC E113 3 X 16		
		1	5110800	*Dyno Super Electric 8' 0-Inst		
		35	6102425500	*Dyno EZ Dets 24' 25/500		
		29	6103025500	*Dyno EZ Dets 30' 25/500		
		45	6104025500	*Dyno EZ Dets 40' 25/500		
		13	6105025500	*Dyno EZ Dets 50' 25/500		
		10	6211217	Dyno EZTL 12' MS17		
	Total for DWR#		**65609**			
Total for Job#			**710203**			

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Explosives Inventory

For the period 01/01/1990 and ending 02/03/2012

Date	DWR	Qty	Item No	Description	Cost	Total
7/31/2007						
Job: 711701				**Riverside Mining LTD Shot 1**		**Riverside Mining Ltd.**
	65624					
		55	110216	Dyno Tx 2 x 16"		
		85	151033	Accurate Booster 1/3#		
		9680	204055	Alpha Fragpak-ANFO Bagged		
		24.99	237A2516	*SECE113A 2.5 X 16		
		2	5110800	*Dyno Super Electric 8' 0-Inst		
		45	6002014	*Dyno Primadet MS 20/14		
		39	6003014	*Dyno Primadet MS 30/14		
		51	6004014	*Dyno Primadet MS 40/14		
		7	6211209	EZTL 12' MS09 Ensign Bickford		
		65	6212017	Dyno EZTL 20' MS17		
		36	6212025	Dyno EZTL 20' MS25		
		4	6212067	Dyno EZTL 20' MS67		
		8	980	CONNECTING WIRE		
	Total for DWR#			**65624**		
Total for Job#				**711701**		

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Explosives Inventory

For the period 01/01/1990 and ending 02/03/2012

Date	DWR	Qty	Item No	Description	Cost	Total
8/14/2007						
Job:	**711702**			**Riverside Mining LTD Shot 2**	**Riverside Mining Ltd.**	
	63614					
		22	151050	*Accurrate Booster 1/2#		
		67	151100	*Accurate Booster 1#		
		55	180208	SEC Detagel 2 X 8'		
		8500	200	Alpha Miniprill Fragmax NCN w/Oil		
		1756.15	237316	SEC E113 3 X 16		
		2	5032415	ETI Riodet Elec Det 24/15		
		32	6603020	Orica Exel MS 30ft. #20		
		25	6604020	Orica Exel MS 40ft. #20		
		70	6606020	Orica Exel MS 60ft. #20		
		10	6671209	Orica Connectadet 12' MS9		
		10	6672017	Orica Connectadet 20' MS17		
		8	6672025	Orica Connectadet 20' MS25		
		33	6672042	Orica Connectadet 20' MS42		
		3	6672065	Orica Connectadet 20' MS65		
		7	980	CONNECTING WIRE		
	Total for DWR#			**63614**		
Total for Job#				**711702**		

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Explosives Inventory

For the period 01/01/1990 and ending 02/03/2012

Date	DWR	Qty	Item No	Description	Cost	Total
8/28/2007						
Job: 711703				**Riverside Mining LTD Shot 3**	**Riverside Mining Ltd.**	
	63331					
		165	180208	SEC Detagel 2 X 8'		
		11990	204055	Alpha Fragpak-ANFO Bagged		
		2	5110800	*Dyno Super Electric 8' 0-Inst		
		26	6002014	*Dyno Primadet MS 20/14		
		102	6004014	*Dyno Primadet MS 40/14		
		2	6212017	Dyno EZTL 20' MS17		
		63	6212025	Dyno EZTL 20' MS25		
		39	6212042	Dyno EZTL 20' MS42		
		18	6212067	Dyno EZTL 20' MS67		
		250	972	*Orica Exel Noiseless LIL Det 493'/Roll		
		5	980	CONNECTING WIRE		
	Total for DWR#		**63331**			
Total for Job#			**711703**			

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Explosives Inventory

For the period 01/01/1990 and ending 02/03/2012

Date	DWR	Qty	Item No	Description	Cost	Total
9/14/2007						
Job: 711704				**Riverside Mining LTD Shot 4**		**Riverside Mining Ltd.**
	65669					
		64	180208	SEC Detagel 2 X 8'		
		2585	204055	Alpha Fragpak-ANFO Bagged		
		2	5110800	*Dyno Super Electric 8' 0-Inst		
		12	6002014	*Dyno Primadet MS 20/14		
		21	6003014	*Dyno Primadet MS 30/14		
		10	6004014	*Dyno Primadet MS 40/14		
		21	6006014	*Dyno Primadet MS 60/14		
		8	6211217	Dyno EZTL 12' MS17		
		8	6212017	Dyno EZTL 20' MS17		
		11	6212025	Dyno EZTL 20' MS25		
		5	6212067	Dyno EZTL 20' MS67		
		200	972	*Orica Exel Noiseless LIL Det 493'/Roll		
		5	980	CONNECTING WIRE		
	Total for DWR#			**65669**		
Total for Job#				**711704**		

Grand Total for the period

M. J. Baxter Drilling Co.

12485 Hwy 67 North
Lakeside, CA 92040

Explosives Inventory

For the period 01/01/1990 and ending 02/03/2012

Date	DWR	Qty	Item No	Description	Cost	Total
9/24/2007						
Job:	**711705**		**Riverside Mining LTD Shot 5**		**Riverside Mining Ltd.**	
	63348					
		87	151100	*Accurate Booster 1#		
		94	180208	SEC Detagel 2 X 8'		
		12430	204055	Alpha Fragpak-ANFO Bagged		
		56.65	237316	SEC E113 3 X 16		
		1	5110800	*Dyno Super Electric 8' 0-Inst		
		28	6002014	*Dyno Primadet MS 20/14		
		73	6006014	*Dyno Primadet MS 60/14		
		75	6106025500	*Dyno EZ Dets 60' 25/500		
		18	6212017	Dyno EZTL 20' MS17		
		5	6212042	Dyno EZTL 20' MS42		
		300	972	*Orica Exel Noiseless LIL Det 493'/Roll		
		5	980	CONNECTING WIRE		
	Total for DWR#		**63348**			
Total for Job#			**711705**			

Grand Total for the period

M. J. Baxter Drilling Co.

12485 Hwy 67 North
Lakeside, CA 92040

Explosives Inventory

For the period 01/01/1990 and ending 02/03/2012

Date	DWR	Qty	Item No	Description	Cost	Total
10/1/2007						
Job: 711706				**Riverside Mining LTD Shot 6**		**Riverside Mining Ltd.**
	66704					
		100	151100	*Accurate Booster 1#		
		55	180208	SEC Detagel 2 X 8'		
		15100	200	Alpha Miniprill Fragmax NCN w/Oil		
		55	204055	Alpha Fragpak-ANFO Bagged		
		1	5110800	*Dyno Super Electric 8' 0-Inst		
		63	6002014	*Dyno Primadet MS 20/14		
		26	6003014	*Dyno Primadet MS 30/14		
		30	6004014	*Dyno Primadet MS 40/14		
		22	6006014	*Dyno Primadet MS 60/14		
		14	6008014	*Dyno Primadet MS 80/14		
		19	6212017	Dyno EZTL 20' MS17		
		15	6212025	Dyno EZTL 20' MS25		
		70	6212042	Dyno EZTL 20' MS42		
		18	6212067	Dyno EZTL 20' MS67		
		800	972	*Orica Exel Noiseless LIL Det 493'/Roll		
		3	980	CONNECTING WIRE		
	Total for DWR#			**66704**		
Total for Job#				**711706**		

Grand Total for the period

Question #24:

Describe all waste materials generated from the Company's operation at the site. Provide information on the storage and disposal methods for each waste, the frequency of disposal, and quantities of waste generated annually. Provide copies of all manifests or other documents evidencing the Company's offsite disposal; of wastes from the Site.

Answer:

To the best of my knowledge, there was no waste generated by MJ Baxter during our operations at the Site. All explosives were consumed in the blast as a result of the high heat generated during the blasting operations.

Question #25:

Provide copies of all state and federal permits related to the Company's operations at the Site, including permits that the Company obtained on behalf of other entities.

Answer:

This is a copy of our existing BATF License. MJ Baxter has continually maintained a current BATF License for the past 30 years.

Other permits obtained are attached.

DEPARTMENT OF THE TREASURY - BUREAU OF ALCOHOL, TOBACCO AND FIREARMS

LICENSE/PERMIT (18 U.S.C. CHAPTER 40, EXPLOSIVES)

In accordance with the provisions of Title XI, Organized Crime Control Act of 1970, and the regulations issued thereunder (27 CFR Part 555)you may engage in the activity specified in this license/permit within the limitations of Chapter 40, Title 18, United States Code and the regulations issued thereunder, until the expiration date shown. See "WARNING" and "NOTICES" on back.

DIRECT ATF CORRESPONDENCE TO
Christopher R. Reeves
Chief, Federal Explosives Licensing Center (FELC)
Bureau of Alcohol, Tobacco, Firearms and Explosives
244 Needy Road
Martinsburg, West Virginia 25405
Telephone: 1-877-283-3352, Fax: 1-304-616-4401

LICENSE/PERMIT NUMBER: 9-CA-073-20-2E-00127

EXPIRATION DATE: May 1, 2012

NAME
M. J. BAXTER DRILLING COMPANY

Premises Address CHANGES? You must notify the FELC at least 10 days before the m
12485 N HWY 67
LAKESIDE, CA 92040-0000

TYPE OF LICENSE OR PERMIT
20-MANUFACTURER OF HIGH EXPLOSIVES

CHIEF, FEDERAL EXPLOSIVES LICENSING CENTER (FELC)
Christopher R. Reeves
Christopher R. Reeves

PURCHASING CERTIFICATION
I certify that this is a true copy of a license/permit issued to me to engage in the activity specified.

(SIGNATURE OF LICENSEE/PERMITTEE)

Mailing Address CHANGES? You must notify the FELC at least 10 days before the chan
BAXTER BLASTING CO.
M. J. BAXTER DRILLING COMPANY
PO BOX 245
EL CAJON, CA 92022-

The licensee/permittee named herein shall use a reproduction of this license/permit to assist a transferor of explosives to verify the identity and status of the licensee/permittee as provided in 27 CFR Part 555. The signature on each reproduction must be an ORIGINAL signature.

ATF F 5400.14/5400.15, Part 1 (8/89)

STATE OF CALIFORNIA
DEPARTMENT OF CALIFORNIA HIGHWAY PATROL

HAZARDOUS MATERIALS TRANSPORTATION LICENSE

CHP 360H (REV. 1/00) OPI 062

CONTROL NUMBER	LICENSE NUMBER	ISSUE DATE	EFFECTIVE DATE	EXPIRATION DATE
184006	4899	4/9/2008		4/30/2009

CHP CARRIER NUMBER	LOCATION	☐ Duplicate	☐ Replacement
CA 7911		☐ Initial	☑ Renewal

LICENSEE NAME AND PHYSICAL ADDRESS *(only if different from below)*

BAXTER BLASTING COMPANY
M.J. BAXTER DRILLING COMPANY
12485 HIWAY 67 N
LAKESIDE CA 92040

LICENSEE NAME AND MAILING ADDRESS

BAXTER BLASTING COMPANY
M.J. BAXTER DRILLING COMPANY
P.O. BOX 245
EL CAJON CA 92022

ATTENTION:

PROPERTY OF THE CALIFORNIA HIGHWAY PATROL (CHP)

The original valid license must be kept at the licensee's place of business as indicated on the license and a legible copy must be carried in any vehicle or combination transporting hazardous materials and must be presented to any CHP officer upon request. This license is NON-TRANSFERABLE and must be surrendered to the CHP upon demand or as required by law. A majority change in ownership or control of the licensed activity shall require a new license. This license may be renewed by submitting an application and appropriate fee to the CHP. Persons whose licenses have expired or are otherwise no longer valid must immediately cease the activity requiring a license. THERE IS NO GRACE PERIOD. For licensing information contact CHP, Commercial Vehicle Section at (916) 327-3310.

This carrier is on the special routing/safe stopping place mailing lists as indicated below:

- ☑ (HMX) Explosives subject to Division 14, California Vehicle Code (CVC).
- ☐ (HMPIH) Poison Inhalation Hazard materials in bulk packagings subject to Division 14.3, CVC.
- ☐ (HRCQ) Highway Route Controlled Quanity radioactive materials subject to Division 14.5, CVC.

Any person who dumps, spills, or causes the release of hazardous materials or hazardous waste upon any highway shall immediately notify the CHP or the agency having jurisdiction for that highway. The minimum fine for failure to make the appropriate notification is $ 2,000.00. (CVC Section 23112.5)

State Of California

CONTRACTORS STATE LICENSE BOARD

ACTIVE LICENSE

State of California Department of Consumer Affairs

License Number **871842**

Entity INDIV

Business Name GLENN A INVERSO

Classification(s) A

Expiration Date 01/31/2010

CSLB

STATE OF CALIFORNIA
DEPARTMENT OF
Consumer Affairs

CONTRACTORS' STATE LICENSE BOARD

№ 309281

This license is the property of the Registrar of contractors, is not transferable, and shall be returned to the Registrar upon demand when suspended, revoked, or invalidated for any reason. It becomes void if not renewed on or before June 30th of each odd-numbered year.

CONTRACTOR'S LICENSE

DEPARTMENT OF CONSUMER AFFAIRS
REGISTRAR OF CONTRACTORS
STATE OF CALIFORNIA

Pursuant to the provisions of Chapter 9 of Division 3 of the Business and Professions Code and the Rules and Regulations of the Contractors' State License Board, the Registrar of Contractors does hereby issue this license to:

BAXTER BLASTING COMPANY

to engage in the business or act in the capacity of a contractor in the following classification(s):

A GENERAL ENGINEERING CONTRACTOR
SC 61 BLASTING

WITNESS *my hand and official seal this*
26th *day of* August, 1975

Leo P. Koschka
Registrar of Contractors

Baxter Blasting Co.
Signature of licensee

Signature of person who qualified

RECEIVED MAY 0 2 2007

UNITED STATES OF AMERICA
DEPARTMENT OF TRANSPORTATION
PIPELINE AND HAZARDOUS MATERIALS SAFETY ADMINISTRATION

HAZARDOUS MATERIALS CERTIFICATE OF REGISTRATION FOR REGISTRATION YEAR(S) 2007-2010

Registrant: M.J. BAXTER DRILLING CO.
Attn: JEFF BRUST
PO BOX 245
EL CAJON, CA 92022-0245

This certifies that the registrant is registered with the U.S. Department of Transportation as required by 49 CFR Part 107, Subpart G.

This certificate is issued under the authority of 49 U.S.C. 5108. It is unlawful to alter or falsify this document.

Reg. No: 050207 550 029PR Issued: 05/02/2007 Expires: 06/03/2010

Record Keeping Requirements for the Registration Program

The following must be maintained at the principal place of business for a period of three years from the date of issuance of this Certificate of Registration:

(1) A copy of the registration statement filed with PHMSA; and
(2) This Certificate of Registration

Each person subject to the registration requirement must furnish that person's Certificate of Registration (or a copy) and all other records and information pertaining to the information contained in the registration statement to an authorized representative or special agent of the U. S. Department of Transportation upon request.

Each motor carrier (private or for-hire) and each vessel operator subject to the registration requirement must keep a copy of the current Certificate of Registration or another document bearing the registration number identified as the "U.S. DOT Hazmat Reg. No." in each truck and truck tractor or vessel (trailers and semi-trailers not included) used to transport hazardous materials subject to the registration requirement. The Certificate of Registration or document bearing the registration number must be made available, upon request, to enforcement personnel.

For information, contact the Hazardous Materials Registration Manager, PHH-62, Pipeline and Hazardous Materials Safety Administration, U.S. Department of Transportation, 400 Seventh Street, SW, Washington, DC 20590, telephone (202) 366-4109.

Jeff Brust
M.J. Baxter Drilling Co.
P.O Box 245
El Cajon CA. 92022

PLACE STICKER AT TOP OF ENVELOPE TO THE RIGHT OF THE RETURN ADDRESS, FOLD AT DOTTED LINE

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